

# Smithers List



Part of **pay.uk**

**Smithers/Pay.UK NON-IMPACT Print Research Results**

December 2020

# SMITHERS/Pay.UK NON-IMPACT PRINT RESEARCH RESULTS

## Introduction

Fraudulent alteration of cheques is a major concern to banks and building societies, particularly where printed words and figures are removed by various mechanical methods and are replaced by false data. For this reason, Pay.UK has agreed with Smithers to carry out tests on non-impact (mainly laser) printers with a view to establishing the quality of print adhesion to cheque paper.

The tests are based on known methods used by fraudsters to alter cheques, and are carried out entirely by Smithers in accordance with testing procedures devised by them in consultation with Pay.UK.

It should be noted that:

- i) Machines are submitted voluntarily by the manufacturers for testing by Smithers.
- ii) Not all machines on the market are submitted for testing.
- iii) The machines that achieve the required standard of adhesion are categorised as **'Smithers Grade 1'** printers, and it is these which bank customers are recommended to use.

Smithers have an established reputation of competence and skill in testing of this kind; however, Pay.UK can accept no responsibility for the selection of the printers or for the results of the tests.

### IMPORTANT NOTE:

The following information regarding the results is provided for business purposes. Without the express permission of Pay.UK, it must not be: -

- i) Altered or amended in any way
- ii) Used for any purpose other than that set out above.

This information is provided on the basis that Pay.UK and its members either individually or collectively accept no responsibility for any loss, damage, cost or expense of whatsoever kind arising directly or indirectly from or in connection with the use by any person of any information or other material contained herein. Any use of any of the information or other material contained in this document by you shall signify agreement by you to this provision.

Notwithstanding the above, Pay.UK does not seek to exclude or limit in any way any liability for personal injury or death arising directly from the negligence of that company.

The provision of the following information and the information itself is not intended to and should not be understood to constitute in any way any comment, conclusion or representation on the part of Pay.UK or any of its members as to the soundness or appropriateness of any printer for use in cheque printing or otherwise, nor is it intended to and should not be understood to constitute any comment, conclusion or representation with regard to any printer which does not appear within the following information.

## Using the Smithers list

### Smithers approval for Infilling

Smithers report to us that the printers in the list are defined as being Grade I printers, which can produce in-filling of cheques which is comparable with average impact printing in-filling of cheques in regard to resistance to certain known fraudulent methods of attack. Smithers give this approval based on their test results under specified conditions only, when using cheque paper (CBS1) to the specifications laid out in Standard 3 –Automated Processing of Vouchers.

Smithers recommends that in using any of these printers for cheque in-filling, they be used in conjunction with our advice for storing and handling cheque stock in the *Best Practice Guidelines for Using Laser Printers to Infill Company Cheques*. The Guidelines can be downloaded from [www.chequeandcredit.co.uk](http://www.chequeandcredit.co.uk)

### Pay.UK approval for MICR Code line printing

Pay.UK approval for MICR code line printing covers the following paper types:

- CBS1 for encoding cheques and bank giro credits
- CBS2 for encoding bank giro credits

### Status column

Current = Printer which is within the 4-year qualification period or has undergone further renewal process since its first qualification date.

Archive = Printer whose 4-year qualification period has expired. Where these printers are already in use for infilling cheques then they may continue to be used for that purpose. However, if looking to purchase a new printer, it is recommended that a printer, which is under current qualification, is considered.

**LASER PRINTERS**

Printer	Status C= Current A = Archive	Smithers Approval Date	SPECIFIED CONDITIONS			PAY.UK approved for MICR codeline printing	
			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
Aficio MP1100	A	Nov 2007	Type 1350E	110	S		
ATI Fast Check 60	A	Jan 1999	Non-magnetic toner ref. 310981-502	60	S		
ATI 5060	A	May 2000	Standard non-magnetic toner	60	S		
ATI 7070	A	Jan 2001	Standard toner ref. 399070-950	70 (A4)	S		
Brother HL 2460 MICR	A	May 2003	Manufacturers MICR Tech MT27 MICR toner	22 (A4)	S		
Brother HL 2700	A	Oct 2005	Brother toner ref. TN-04BK (black)	8 (A4)	S		
Brother HL 4050CDN HL-4040CN HL-4070CDW DCP-9040CN DCP-9042CDN DCP-9045CDN MFC-9440CN MFC-9450CDN MFC-9840CDW	A	Mar 2008	Standard Brother polymerized black: TN-130BK/TN-135BK	20 (A4)	S		
Brother HL4150CDN	A	Feb 2011	Toner: TN235BK – (TKEH0J8000485CLY1338)	24 (A4)	S		
Brother HL4570CDW, HL4570CDWT, DCP9270CDN and MFC9970CDW	A	Feb 2011	Toner: TN235BK – (TKEH0J8000485CLY1338)	28 (A4)	S		
Brother HL5150D/5170DN	A	Feb 2004	Manufacturers standard toner ref. TN3030	20 (A4)	S		
Brother HL5240 Series: HL5250DN HL5270DN HL5280DW MFC8460 MFC8860DN MFC8870DW DCP8060 DCP8065DN	A	Mar 2006	Manufacturers standard toner: TN3230/ND-3280	30 (A4)	S		

Printer	Status C= Current A = Archive	Smithers Approval Date	SPECIFIED CONDITIONS			PAY.UK approved for MICR codeline printing	
			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
Brother HL-5340D HL-5350DN HL-5350DNLT HL-5380DN HL-5370DW DCP-8070D DCP-8085DN MFC-8370DN MFC-8380DN MFC-8880DN MFC-8890DW	A	Mar 2009	Toner ref. TN-3230/TN-3280	30 (A4)	S		
Brother HL5450DN HL5440D HL5450DNT HL5470DW MFC8510DN MFC8520DN DCP8110DN	A	Mar 2012	Toner ref. TN3380-MTPA12JD000168FLY4717	38 (A4)	S		
Brother HL6050/D/DN	A	May 2004	Manufacturers standard toner ref. TN4100	24 (A4)	S		
Brother HL6180DW HL6180DWT MFC8950DW MFC8950DWT DCP8250DN	A	Mar 2012	Toner ref. TN3390-MTPA12JL000704FLY4742	40 (A4)	S		
Brother HL7050/N	A	May 2004	Manufacturers standard toner ref. TN5500	28 (A4)	S		
Brother HL – L8250CDN	A	Mar 2014	TN326 (Black, cyan, magenta and yellow)	28 (A4)	S		
Brother HL – L8350CDW	A	Mar 2014	TN329 (Black, cyan, magenta and yellow)	30 (A4)	S		
Brother HL – L9200CDWT	A	Mar 2014	TN900 (Black, cyan, magenta and yellow)	30 (A4)	S		
Brother HL-L5100DN HL-L5200DW HL-L5100DNT HL-L5200DWT HL-L5000D DCP-L5500DN MFC-L5700DN MFC-L5750DW	A	Mar 2016	TN-3430 TN-3480	40 (A4)	S		

Printer	Status C= Current A = Archive	Smithers Approval Date	SPECIFIED CONDITIONS			PAY.UK approved for MICR codeline printing	
			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
Brother HL-L6400DW HL-L6400DWT MFC-L6900DW MFC-L6900DWT* DCP-L6600DW HL-L6300DW HL-L6300DWT MFC-L6800DW MFC-L6800DWT	A	Mar 2016	TN-3430 TN-3480 TN-3512 TN-3520	40/50 ppm	S		
Brother MFC-L9570CDW MFC-L8900CDW DCP-L8410CDW MFC-L8690CDW HL-L9310CDW HL-L8360CDW HL-L8260CDW	C	Jun 2017	TN-910 TN-421 TN-423 TN-426	31 ppm (A4)	S		
Canon Oce VarioStream 4400	A	Nov 2015	Toner Type: OCP-KM02-D43-M20 Developer Type: OCP-KM02-D33-020	350 (A4)	S	Yes	Yes
Canon Oce VarioStream 4450	A	Nov 2015	Toner Type: OCP-KM02-D43-M20 Developer Type: OCP-KM02-D33-020	440 (A4)	S	Yes	Yes
Canon Oce VarioStream 4550	A	Nov 2015	Toner Type: OCP-KM02-D43-M20 Developer Type: OCP-KM02-D33-020	550 (A4)	S	Yes	Yes
Canon Oce VarioStream 4650	A	Nov 2015	Toner Type: OCP-KM02-D43-M20 Developer Type: OCP-KM02-D33-020	600 (A4)	S	Yes	Yes
Delphax CR Series (1300T with MICR toner)	A	Jan 2003	MICR toner ref. M10335	300 ft/min	W	Yes	Yes
Delphax Technologies Ltd Imaggia MG20	A	Apr 2001	MICR toner ref. 6716	100 ft/min	S	Yes	Yes
Delphax Technologies Ltd PS75 MICR	A	Aug 2000	MICR No B-2-39	75 ppm (A4)/ 37.5 ppm (A3)	S	Yes	
Delphax Technologies Ltd PSI PP 4050/60 MICR	A	Jun 2001	Manufacturer's MICR toner	59 (A4)	W	Yes	
Delphax Technologies Ltd Pro 1357 MICR	A	Mar 2012	Rosetta Technologies Promark toner	135 ppm (A4)	S	Yes	Yes
Delphax Technologies Ltd SP 8200 DN MICR	A	Mar 2012	Rosetta Technologies MICR toner	50 ppm (A4)	S	Yes	Yes

Printer	Status C= Current A = Archive	Smithers Approval Date	SPECIFIED CONDITIONS			PAY.UK approved for MICR codeline printing	
			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
Delphax Technologies Ltd SP 8300 DN MICR	A	Oct 2016	Rosetta Technologies MICR toner	50 ppm (A4)	S	Yes	Yes
Delphax Technologies Ltd 8110e MICR	A	Feb 2016	Rosetta Technologies Promark 8100 Toner	110 ppm (A4)	S	Yes	Yes
Delphax Technologies Ltd 8120e MICR	A	Feb 2016	Rosetta Technologies Promark 8100 Toner	135 ppm (A4)	S	Yes	Yes
Europatec 16e	A	Dec 1997	Manufacturers standard toner, fuser 185P <sup>o</sup> C, density 3	16	W		
Genicom MI450	A	Nov 2002	MICR toner ref. 230101908 <b>Supplied through CPG International</b>	45 ppm (A4)	S		
HDS 6860	A	Nov 1997	Manufacturers standard toner	60	S		
Hitachi Koki DDP70 MICR	A	Jun 2002	Rosetta MICR toner ref. 01-TK70M	70 (A4)	S	Yes	Yes
Hitachi DDP184	A	Mar 2003	Black toner ref. NH-427SG17 Blue toner ref. YSK-TCB74 Red toner ref. YSK-TCR15	92 (A4)	S		
HP Laserjet 1320	A	Nov 2005	MICR toner ref. MICR-TC-LJ 1320B - H2 temperature setting <b>Supplied through SAX</b>	22 (A4)	S		
HP Laserjet 2420/2430	A	Jul 2005	MICR toner ref. MICR-TC-LJ2420B/LJ2430B - H2 temperature setting <b>Supplied through SAX</b>	30 (A4)	S		
HP Laserjet 3005	A	Apr 2007	MICR ref. MICR-TC-LJ3005 <b>Supplied by Bluemega Technology Limited</b>	33 ppm (A4)	S		
HP Laserjet P3015	A	Oct 2010	MICR toner ref. CE255X <b>Supplied through Checkprint and Tall Security Print Limited</b>	42	S	Yes	Yes
HP Laserjet 4000	A	Dec 1998	MICR toner ref. MICR-TC-LJ4000 <b>Supplied through SAX</b>	16	S		
HP Laserjet 4050	A	Feb 2000	MICR toner ref. MICR-TC-LJ4000 User fuser setting configured to cardstock (high temperature) *Use tray 2 only, NOT manual feed <b>Supplied through SAX</b>	16	S	Yes	
HP Laserjet 4100/4150	A	Sep 2001	MICR toner ref. MICR-TC-LJ4100/4150 - user fuser setting configured to cardstock (high temperature) <b>Supplied through SAX</b>	25 (A4)	S	Yes	
HP Laserjet 4200/4300	A	Feb 2003	MICR toner ref. MICR-TC-LJ4200 <b>Supplied through SAX</b>	33/43 (A4)	S	Yes	
HP Laserjet 4250	A	Jul 2005	MICR toner ref. MICR-TC-LJ4250B - H2 temperature setting <b>Supplied through SAX</b>	45 (A4)	S		
HP Laserjet 4350	A	Mar 2005	MICR toner ref. Q5942ACS <b>Supplied through Checkprint and Tall Security Print Limited</b>	55 ppm (A4)	S	Yes	Yes

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			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
HP Laserjet 4350	A	Jul 2005	MICR toner ref. MICR-TCLJ4350B - H2 temperature setting <b>Supplied through SAX</b>	55 (A4)	S		
HP CM8060 Colour MFP	A	Nov 2006	HP Black ink cartridge with Vivera ink.	60 ppm	S		
HP Laserjet 8100/8150	A	Jul 2000	Manufacturers MICR-TC-LJ8100 <b>Supplied through SAX</b>	32	S	Yes	
HP Laserjet 8150	A	Jul 2001	Checkprint MICR Toner <b>Supplied through Checkprint and Tall Security Print Limited</b>	32	S	Yes	Yes
HP Laserjet 9000	A	Feb 2003	MICR toner ref. MICR-TC-LJ9000 <b>Supplied through SAX</b>	50 (A4)	S	Yes	
HP PageWide 700 Series	C	Mar 2017	HP liquid pigment M0J74AE M0J78AE M0J82AE M0J86AE	50 ppm (A4)	S		
HP PageWide Pro 700 Series	C	Mar 2017	HP liquid pigment M0J90AE M0J94AE M0J98AE M0K02AE	50 ppm (A4)	S		
HP PageWide Managed 700 Series	C	Mar 2017	HP liquid pigment X4D10AC X4D13AC X4D16AC X4D19AC	50 ppm (A4)	S		
HP PageWide Enterprise 700 Series	C	Mar 2017	HP liquid pigment M0K06XC M0K10XC M0K25XC M0K29XC	50 ppm (A4)	S		
HP M402 Series	C	Jul 2018	MICR-26X <b>Supplied through Checkprint and Tall Security Print Limited</b>	38 ppm (A4)	S	Yes	
IBM InfoPrint 60 (3160 Model 002)	A	Sept 1998	Manufacturers standard toner No. 1402822	60	S		
IBM InfoPrint 70	A	Mar 2001	Manufacturers standard toner No. 69G7372	70 (A4)	S		
IBM InfoPrint 62	A	Dec 2000	Manufacturers standard toner No. 69G7306	64 (A4)	W		
IBM InfoPrint 2000 @ 600 dpi	A	Aug 2000	Standard toner ref. 69G7315 - auto-fusing temp/Print density setting 1	110 ppm (A4)	S		
IBM 3900-OW1	A	Mar 2002	Manufacturers standard toner No. 1402822 Print contrast setting at 1 or 4	162 ft/min	W		



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IBM InfoPrint 4000 Models ID1/ID2, IS1	A	Dec 2000	Non-magnetic toner ref. 1402822	162 ft/min	W		
IBM InfoPrint 4100 Model HS1 HD1/2	A	Aug 2002	Standard toner ref. 69G7377	175 ft/min.	W		
IBM InfoPrint 4100 Model HD3/4	A	Nov 2003	Standard toner ref. V3 57P1887 Developer ref. 57P892	230 ft/min	W		
IBM InfoPrint 4100 Model HD3/4	A	Nov 2003	Standard toner ref. V3 57P1887 Developer ref. 57P1892	280 ft/min	W		
IBM InfoPrint 4100 HD3/4 MICR	A	Jun 2003	MICR toner ref. 57P2074 Developer ref. 57P2100	230 ft/min.	W	Yes	Yes
IBM InfoPrint 4100 (MICR) Model HS1 HD1/2	A	Aug 2002	MICR toner ref. 57P2074	175 ft/min.	W	Yes	Yes
IBM InfoPrint 4100 HD5/6 MICR including HS3	A	April 2007	MICR black toner ref. 57P2074	280 ft/min.	W	Yes	Yes
IBM InfoPrint 4100 HD5/6 MICR including HS3	A	April 2007	Standard black toner ref. V2 69G7377	330 ft/min.	W		
Kodak Digimaster EX110 (Previously known as 9110m) (Heidelberg)	A	Apr 2003	Manufacturer's MICR toner <b>Supplied through NexPress Solutions (USA)</b>	110 (A4)	S	Yes	Yes
Kodak Digimaster EX125 (Previously known as E125)	A	Jul 2004	Manufacturer's MICR toner <b>Supplied through NexPress Solutions (USA)</b>	125 ppm (A4)	S	Yes	Yes
Kodak Digimaster EX138	A	Apr 2008	Kodak Digimaster Black M1 Toner (MICR)	138 ppm (A4)	S	Yes	Yes
Kodak Digimaster EX150 (Previously known as E150)	A	Jun 2004	Manufacturer's MICR toner <b>Supplied through NexPress Solutions (USA)</b>	150 ppm (A4)	S	Yes	Yes
Kodak Didimaster EX300	A	Jun 2009	M1 MICR toner	300 ppm (A4)	S	Yes	Yes
Kodak Digimaster 9110 (Heidelberg)	A	Jun 2002	Manufacturer's standard toner <b>Supplied through NexPress Solutions (UK)</b>	110 (A4)	S		
Kodak Digimaster 9150 (Heidelberg)	A	Dec 2002	Manufacturer's standard 'D1 toner' <b>Supplied through NexPress Solutions (UK)</b>	150 ppm (A4)	S		
Kodak Nexpress S3000	A	Apr 2008	Kodak Nexpress MICR black dry ink	100 (A4)	S	Yes	Yes
Konica Minolta bizhub 420	A	Feb 2007	Black TN511	42 ppm	S		
Konica Minolta bizhub 750	A	Feb 2007	Black TN710	75 ppm	S		
Konica Minolta bizhub C252	A	Feb 2007	Black TN210	25 ppm	S		
Konica Minolta bizhub C300	A	Feb 2007	Black TN310	30 ppm	S		
Konica Minolta bizhub C352	A	Nov 2006	Black 8938-705	35 ppm	S		
Konica Minolta bizhub C353	A	Dec 2007	Black TN213K	35 ppm	S		
Konica Minolta bizhub C450	A	Feb 2007	Black TN310	45 ppm	S		

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Konica Minolta bizhub C650	A	Dec 2007	Black A070150	65 ppm	S		
Konica Minolta bizhub PRO 920	A	Feb 2007	Black TN910	92 ppm	S		
Konica Minolta bizhub PRO C500 (Previously known as 8050)	A	Jul 2004	Polymerised TN501K	50 (A4)	S		
Konica Minolta bizhub PRO C6500	A	Nov 2006	Black Simitri HD	65	S		
Konica Minolta 7030	A	May 2001	Manufacturer's standard toner TON7020	30 (A4)	S		
Konica Minolta 7075	A	May 2001	Manufacturer's standard toner TON7075	75 (A4)			
Konica Minolta 7085	A	Feb 2003	Manufacturer's standard toner TN801K	85 (A4)	S		
Konica Minolta 7145	A	Jul 2004	Polymerised TN401K	45 (A4)	S		
Konica Minolta 7165	A	Feb 2003	Manufacturer's standard toner TN601K	65 (A4)	S		
Kyocera Mita KM-5035	A	Sep 2004	Manufacturer's standard toner ref. TK-2530	50 (A4)	S		
Kyocera Mita FS-9500 DN	A	Jan 2003	Manufacturer's standard toner ref. TK-70	50 (A4)	S		
Lexmark Optra S2450	A	Nov 1997	Manufacturers standard toner	24	S		
Lexmark Optra N	A	Mar 1999	Manufacturers MICR toner	24	S		
Lexmark T632	A	Nov 2005	Lexmark toner ref. T632/T634 32k Return Program Print Cartridge pn 0012A7465	38 (A4)	S		
Lexmark T640	A	May 2007	Manufacturer's High Yield Print Cartridge	33 (A4)	S		
Lexmark T644	A	May 2007	Manufacturer's High Yield Print Cartridge	48 (A4)	S		
Meto LIS 1630	A	Dec 1999	Digital Micro Shutter Meto Microfine Toner Ref. 9010-0-0076-000 Xenon lamp with 'light' image density setting	30	W		
Meto LIS 1660	A	Nov 1999	Digital Micro Shutter Meto Microfine Toner Ref. 9010-0-0076-000 Xenon lamp with 'light' image density setting	60	W		
Meto LIS 1830	A	Jul 2001	Cold flash fusion laser Manufacturer's standard toner ref. 7893867 'Normal' image density setting	30	W		
Nipson Varypress 400	A	Apr 2004	MICR toner ref. MICR T2005B	125 m/min	W	Yes	Yes
Nipson 918CF (Xeikon)	A	Jan 2000	Manufacturers NEC EF-3447T	42 ft/min	W		
Nipson 6100 (Xeikon)	A	Nov 1997	Manufacturers standard (ref. 790) toner	110	W		
Nipson 7000 (Xeikon)	A	Jan 2000	Manufacturers standard (ref. 820) toner, 480dpi	60 m/min	W		
Nipson 7000 (Xeikon)	A	May 2000	Manufacturers MICR toner (ref. T2000), 480dpi	60 m/min	W		
Nipson 8000	A	Apr 2003	MICR toner ref. MICR TM100	70 m/min	W	Yes	Yes
Nipson 8000/Varypress 200	A	Apr 2004	MICR toner ref. T2010A/T3000	70 m/min	W	Yes	Yes
Nipson DIGIFlex/Varypress/ Varyprint	A	Feb 2009	MICR toner ref. T3000	90 m/min	W		

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			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
Océ ColorStream 3000z	A	Jun 2016	OCP-KM03-G78-E10	75m/min	W	Yes	Yes
Océ ColorStream 6000	A	Jun 2016	OCP-KM03-G78-E10	75m/min	W	Yes	Yes
Oce ColorStream 10410	A	Feb 2011	KK01-C35-G10 Note: The ColorStream 10000 range does not support MICR toner – cheque infill only	800 ppm (A4)	W		
Oce ColorStream 10510	A	Feb 2011	KK01-C35-G10 Note: The ColorStream 10000 range does not support MICR toner – cheque infill only	1069 ppm (A4)	W		
Oce ColorStream 10610	A	Feb 2011	KK01-C35-G10 Note: The ColorStream 10000 range does not support MICR toner – cheque infill only	1283 ppm (A4)	W		
Oce ColorStream 10710	A	Feb 2011	KK01-C35-G10 Note: The ColorStream 10000 range does not support MICR toner – cheque infill only	1425 ppm (A4)	W		
Oce PageStream 145	A	Nov 1998	Toner (A2.6 - S26312-F501-A2)	145	W		
Oce Jetstream 1000	A	Mar 2012	KM01-E78	65 m/min	W	Yes	Yes
Oce PageStream 235	A	Nov 1998	Toner (A2.5 - SS6312-F497-A2)	235	W		
OCE PageStream PS350 MICR/SN OCE PS 350 Pinless (Web 400)	A	Jul 2000	MICR 300dpi. Maximum fusing temperature	175 ft/min (350 A4 ppm)	W	Yes	Yes
OCE PageStream 440	A	Jul 2000	MICR Toner No. 2.39, Developer No. 1.39 Note: The PS440 can only be used in MICR mode with the 350 software conversion	220 ft/min	W	Yes	
Oce Pagestream 500	A	Oct 2002	MICR toner ref. Oce Pagestream Black HET No. A2.39, Developer No. A1.39 Note: The PS500 can only be used in MICR mode with the 350 (A4ppm) software conversion	175 ft/min	W	Yes	Yes
Oce VarioPrint 1055/1065/1075	A	Nov 2006	Toner ref. Black F4	55/65/75 ppm	S		
Oce VarioPrint 2062/2075/2075DP	A	Nov 2006	Toner ref. Black F4	62/75 ppm	S		
Oce VarioPrint 2090	A	Nov 2006	Toner ref. Black F11	85 ppm	S		
Oce VarioPrint 2100/2110	A	Nov 2006	Toner ref. Black F11	91/105 ppm	S		
Oce VarioPrint 3070/3090/3110	A	Nov 2006	Toner ref. Black F11	70/90/105 ppm	S		

Printer	Status C= Current A = Archive	Smithers Approval Date	SPECIFIED CONDITIONS			PAY.UK approved for MICR codeline printing	
			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
Oce VarioPrint 5115/ 5160	A	Oct 2003	Standard toner ref. B2.6 Standard developer ref. B1.6 MICR toner ref. KM01-B43 MICR developer ref. KM01-B33 <b>Note: can be used with both toner types</b>	110/158 ppm (A4)	S	Yes	Yes
Oce VarioPrint 5115/5140/5160	A	Oct 2005	MICR toner ref. KM02-B43-D10 Developer ref. KM02-B33-C10	158 ppm (A4)	S	Yes	Yes
Oce VarioStream 6100	A	Feb 2005	Standard toner ref. CA82003-9702)	100 ppm or 51.4 ft ppm (A4)	W		
Oce VarioPrint 6160	A	Mar 2011	VarioPrint 6000 Series MICR Toner	127 ppm (A4)	S	Yes	
Oce VarioPrint 6200	A	Mar 2011	VarioPrint 6000 Series MICR Toner	127 ppm (A4)	S	Yes	
Oce VarioPrint 6250	A	Mar 2011	VarioPrint 6000 Series MICR Toner	127 ppm (A4)	S	Yes	
Oce VarioPrint TP Line series 6160 - 6320	A	Nov 2012	Océ Toner 1060096067	6160 170 ppm (A4) 6320 314 ppm (A4)	S		
Oce VarioPrint Ultra series 6160 – 6320	A	Nov 2012	Océ Toner 1060032357	6160 170 ppm (A4) 6320 314 ppm (A4)	S		
Oce VarioStream 7000 Range – 7400, 7450, 7550, 7650 – EPQ Variant	A	Feb 2006	Standard toner ref. KK01-D25 Standard developer ref. KK01-D15 MICR toner ref. KM01-D23 MICR developer ref. KM01-D13 <b>Note: can be used with both toner types</b>	Up to 600 (A4)	W	Yes	Yes
Oce VarioStream 7400 (VS 7000)	A	Feb 2011	MICR toner ref. KM02-D43-M20	350 ppm (A4)	W	Yes	
Oce VarioStream 7450 (VS 7000)	A	Feb 2011	MICR toner ref. KM02-D43-M20	440 ppm (A4)	W	Yes	
Oce VarioStream 7550 (VS 7000)	A	Feb 2011	MICR toner ref. KM02-D43-M20	500 ppm (A4)	W	Yes	
Oce VarioStream 7650 (VS 7400)	A	Mar 2003	MICR toner ref. Oce Pagestream Black HET A2.39. Developer No. A1.39 <b>Note: The VS7400 can only be used in MICR mode with 350 (A4ppm) software conversion controlled by the MICR developer station</b>	350 ppm (A4)	W	Yes	Yes

Printer	Status C= Current A = Archive	Smithers Approval Date	SPECIFIED CONDITIONS			PAY.UK approved for MICR codeline printing	
			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
Oce VarioStream 7650 (VS 7550)	A	Mar 2003	MICR toner ref. Oce Pagestream Black HET A2.39. Developer No. A1.39 <b>Note: The VS7550 can only be used in MICR mode with 500 (A4ppm) software conversion controlled by the MICR developer station</b>	500 ppm (A4)	W	Yes	Yes
Oce VarioStream 7650	A	Sep 2004	MICR toner ref. KM01-D23-M10 Developer No. KM01-D13-A10 Default parameters controlled by installation of MICR developer station	600 ppm (A4)	W		
Oce VarioStream 7650 (VS 7000)	A	Feb 2011	MICR toner ref. KM02-D43-M20	600 ppm (A4)	W	Yes	
Oce VarioStream 8550 (VS 8000)	A	Feb 2011	MICR toner ref. KM02-D43-M20 <b>Note: The VS8000 recognises the toner from transponder in the toner bottle, disables operator controls on fusing parameters, and sets the machine to factory standards</b>	500 ppm (A4)	W	Yes	
Oce VarioStream 8650 (VS 8000)	A	Feb 2011	MICR toner ref. KM02-D43-M20 <b>Note: The VS8000 recognises the toner from transponder in the toner bottle, disables operator controls on fusing parameters, and sets the machine to factory standards</b>	600 ppm (A4)	W	Yes	
Oce VarioStream 8750 (VS 8000)	A	Feb 2011	MICR toner ref. KM02-D43-M20 <b>Note: The VS8000 recognises the toner from transponder in the toner bottle, disables operator controls on fusing parameters, and sets the machine to factory standards</b>	707 ppm (A4)	W	Yes	
Oce VarioStream 9210	A	Apr 2005	Standard toner ref. KK01-C65	400 ppm or 195.28 ft pm (A4)	W		
Oce 8445	A	Nov 2000	Standard toner ref. F11	45 (A4)	S		
Oce 8465	A	Nov 2000	Standard toner ref. F11	62 (A4)	S		
Oce 3165	A	May 2001	Standard toner ref. F11	62 (A4)	S		
Printronix L1524 LaserLine	A	May 2002	Manufacturers MICR toner ref. 706273-001	24 (A4)	W		
QMS DL600	A	Nov 1997	Manufacturers standard toner	6	S		
QMS 2425	A	May 1998	MICR toner ref. 1710146. Pre-set by QMS, software modifications by Checkpoint <b>Supplied through Bottomline Technologies Europe</b>	24	S	Yes	
QMS 2425 TURBO	A	Sep 1998	MICR toner (Ref. 1710146)	24	S	Yes	
QMS3260	A	Aug 1999	Manufacturers MICR toner Fuser temperature set at maximum	32	S		
Ricoh Aficio AP900	A	Oct 2005	Ricoh type 6201D	40 (A4)	S		
Ricoh PRO 8210M	C	Jan 2017	Rosetta Technologies MICR toner	136 ppm	S	Yes	Yes
Ricoh PRO 8220M	C	Jan 2017	Rosetta Technologies MICR toner	136 ppm	S	Yes	Yes
Ricoh PRO 8320M	C	Jun 2020	Rosetta Technologies Promark 8300GB	136 ppm	S		

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			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
Riso Comcolor 3010	A	Jun 2011	Comcolor Series Inks (Black S-6300E, Cyan S-6301E, Magenta S-6302E, Yellow S-6303E)	90 (A4)	S		
Riso Comcolor 3050	A	Jun 2011	Comcolor Series Inks (Black S-6300E, Cyan S-6301E, Magenta S-6302E, Yellow S-6303E)	90 (A4)	S		
Riso Comcolor 7050	A	Jun 2011	Comcolor Series Inks (Black S-6300E, Cyan S-6301E, Magenta S-6302E, Yellow S-6303E)	120 (A4)	S		
Riso Comcolor 9050	A	Jun 2011	Comcolor Series Inks (Black S-6300E, Cyan S-6301E, Magenta S-6302E, Yellow S-6303E)	150 (A4)	S		
Riso UK Kirk Rudy Net Jet Print System	A	Mar 2012	Nano MICR Toner	150 (A4)	S	Yes	Yes
Source Technologies ST9630	A	Apr 2010	PN STI – 204064 and PN STI – 204064064H	45	S	Yes	Yes
Source Technologies ST9650	A	Apr 2010	PN STI – 204064 and PN STI – 204064064H	55	S	Yes	Yes
Source Technologies ST9612	A	Apr 2010	ST MICR Toner – Fuser Temperature: 210°C	17.5	S	Yes	Yes
Troy 400 M401	A	Apr 2012	HP LJ 400 M401 MICR Toner	33 (A4)	S	Yes	
Troy M806	A	Aug 2013	TROY M806 Secure MICR Toner	55 (A4)	S	Yes	
Troy MICR 640	A	Jan 1999	Troy MICR Toner	40	S		
Troy MICR 1100	A	Nov 1999	Troy MICR Toner (02-81031-001)	8	S	Yes	
Troy 1320	A	Sep 2006	Troy 1320 MICR Toner	22 (A4)	S	Yes	
Troy 2015	A	May 2007	Troy 2015 MICR Toner	27 (A4)	S	Yes	
Troy 2055	A	Aug 2008	Troy MICR Toner Ref. 2055	33 (A4)	S	Yes	
Troy MICR 2100	A	Nov 1998	Troy MICR Toner (02-81038-001)	10	S	Yes	
Troy MICR 2200	A	May 2001	Troy MICR Toner (02-81038-001)	18	S	Yes	
Troy MICR 2300	A	Jun 2003	Troy MICR 2300 Toner	25	S	Yes	Yes
Troy 2420	A	Nov 2004	Troy MICR Toner	30	S	Yes	
Troy 2430	A	Nov 2004	Troy MICR Toner	30	S	Yes	
Troy 3005	A	Jan 2007	Troy MICR Toner re. HT-81138	33 (A4)	S	Yes	
Troy 3015	A	Apr 2009	Troy 3015 MICR Toner	40	S	Yes	
Troy MICR 4000	A	Jan 1999	Troy MICR Toner	16	S		
Troy MICR 4015/4014	A	Feb 2008	Troy MICR Toner Ref. 4015/4515	50	S	Yes	
Troy MICR 4050	A	Nov 1999	Troy MICR Toner	17	S		
Troy MICR 4200	A	Oct 2003	Troy MICR 4200 Toner	35	S	Yes	Yes
Troy MICR 4250	A	Dec 2004	Troy MICR 4250 Toner	45	S	Yes	
Troy MICR 4350	A	Dec 2004	Troy MICR 4350 Toner	55	S	Yes	
Troy MICR 4515	A	Feb 2008	Troy MICR Toner Ref. 4015/4515	60	S	Yes	
Troy 600M601	A	Oct 2011	Troy 601, 602, 603, MICR Toner	43	S	Yes	
Troy 600M602	A	Oct 2011	Troy 601, 602, 603, MICR Toner	50	S	Yes	
Troy 600M603	A	Oct 2011	Troy 601, 602, 603, MICR Toner	60	S	Yes	
Troy MICR 8000	A	Jan 1999	Troy MICR Toner (02-17981-001)	26	S	Yes	

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Troy MICR 8150	A	Dec 2002	Troy MICR Toner (02-81023-001)	32	S	Yes	
Troy MICR 9050	A	Jan 2009	Troy MICR 9050 Toner	50	S	Yes	
Troy MICR 604	A	Jan 2015	Troy MICR 604/605/606 Secure Toner	52	S	Yes	
Troy MICR-605	A	Jan 2015	Troy MICR 604/605/606 Secure Toner	58	S	Yes	
Troy MICR 606	A	Jan 2015	Troy MICR 604/605/606 Secure Toner	65	S	Yes	
Troy MICR M402	A	Sep 2015	Troy MICR M402 Secure Toner	38	S		
Troy MICR M506/M527	A	Sep 2015	Troy MICR M506 and M527 Secure Toner	43	S		
Troy M607	C	Jun 2017	Troy MICR Toner	52	S	Yes	
Troy M608	C	Jun 2017	Troy MICR Toner	61	S	Yes	
Troy M609	C	Jun 2017	Troy MICR Toner	71	S	Yes	
Troy KM6136-6136P	C	May 2018	Troy KM6136-6136P MICR Toner	136	S	Yes	
Troy M404	C	May 2019	Troy Secure MICR Toner	38	S	Yes	
Troy M428	C	May 2019	Troy Secure MICR Toner	38	S	Yes	
Troy M507	C	May 2019	Troy M507/M528 Secure MICR Toner	43	S	Yes	
Troy M528	C	May 2019	Troy M507/M528 Secure MICR Toner	43	S	Yes	
Troy M610	C	Dec 2020	TROY M610/611/612 Secure MICR Toner	52	S	Yes	
Troy M611	C	Dec 2020	TROY M610/611/612 Secure MICR Toner	61	S	Yes	
Troy M612	C	Dec 2020	TROY M610/611/612 Secure MICR Toner	71	S	Yes	
Xerox DocuPrint 65	A	Nov 2001	Manufacturers standard toner ref. 6R90321	65	S		
Xerox DocuPrint 96/100	A	Nov 2001	Manufacturers standard toner ref. 6R90100	96	S		
Xerox DocuPrint 96/100 MX	A	Nov 2001	Manufacturers MICR toner ref. 6R90229	96	S		
Xerox DocuPrint 115	A	Nov 2001	Manufacturers standard toner ref. 6R90100	115	S		
Xerox DocuPrint 115 MX	A	Nov 2001	Manufacturers MICR toner ref. 6R90229	115	S		
Xerox DocuPrint 4635/135	A	Nov 2001	Manufacturers standard toner ref. 6R90100	135	S		
Xerox 4635MX	A	Nov 2001	Manufacturers MICR toner ref. 6R90229	135	S	Yes	Yes
Xerox DocuTech 6100	A	Nov 2001	Manufacturers standard toner ref. 6R90100	96	S		
Xerox DocuTech 6115	A	Nov 2001	Manufacturers standard toner ref. 6R90100	115	S		
Xerox DocuTech 6135	A	Nov 2001	Manufacturers standard toner ref. 6R90100	135	S		
Xerox Nuvera 100MX	A	Jun 2006	6R1196 Black MICR Dry Ink Nuvera MX Digital Production System (Hard 35 Durometer pressure roll, 59K49461 and standard fuser roll, 59K39361 combination)	100	S	Yes	Yes
Xerox Nuvera 120MX	A	Jun 2006	6R1196 Black MICR Dry Ink Nuvera MX Digital Production System (Hard 35 Durometer pressure roll, 59K49461 and standard fuser roll, 59K39361 combination)	120	S	Yes	Yes

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			Toner Type	Speed (ppm)	Sheet or Web fed#	CBS1	CBS2
Xerox Nuvera 144MX	A	Jun 2006	6R1196 Black MICR Dry Ink Nuvera MX Digital Production System (Hard 35 Durometer pressure roll, 59K49461 and standard fuser roll, 59K39361 combination)	144	S	Yes	Yes
Xerox Phaser 4510	A	Oct 2010	113R00711	45	S		
Xerox Phaser 6250	A	Feb 2005	Manufacturers standard toner	26	S		
Xerox Phaser 6350	A	Sep 2006	Manufacturers standard black 6300/6350, ref. 106R01076	35 (A4)	S		
Xerox Phaser 6360	A	Jan 2010	Manufacturers standard black 6300/6350/6360, ref. 106R01217	35 (A4)	S		



## INKJET PRINTERS

Printer	Status C= Current A = Archive	Date Approved	Special Comments	Speed (ppm)	Sheet or Web fed#
Accent Color Sciences Truecolor System 400	A	Aug 2000	Hot melt ink ref. ACS 2000, Standard Black, P/N 0001057 (240 dpi) available from IBM & Xerox a) IBM Infoprint Hi-Lite color b) Xerox DocuPrint CF Color Processor	160 ft/min	W
Lexmark J110	A	Apr 2001	Manufacturer's standard black ink ref. 11J3020 Application of 'Perfect Finish' ref. 11J3050 has been approved	16 (A4)	S
Tektronix Phaser 840 **	A	May 1999	Manufacturers standard ink with attachment as marketed by Safe International	6 - 10	S
Tally T3010 SprintJet	A	Sep 2003	Manufacturers Standard black ref. 062112	980 HTUc <u>ps</u> @12cpiUT H	Both Sheet and Web
Tally T3016 SprintJet	A	Nov 2000	Manufacturers Standard ref. 061361	16 (A4)	Both Sheet and Web
Tally T3110 SprintJet	A	Sep 2003	Manufacturers Standard black ref. 062112	980 HTUc <u>ps</u> @12cpiUT H	Both Sheet and Web
Tally T3116 SprintJet	A	Sep 2003	Manufacturers Standard black ref. 061361	2200 cps@12cpi	Both Sheet and Web

**Key #- Web is continuous stationery**

**It is important to note that only those printers which have passed PAY.UK approval for MICR codeline printing should be used for this purpose. These printers are shown in the rightmost column headed 'PAY.UK approved for MICR codeline Printing' and sub-divided into two further columns listed as CBS1 and CBS2. Those printers listed with having an MICR toner must not be used for the printing of the codeline until they have been approved by PAY.UK for this purpose.**

## SMITHERS GRADE I LASER PRINTER SUPPLIERS ADDRESS LIST

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Advanced Technologies International 893 Plymouth Road Slough Trading Estate Slough Buckinghamshire SL1 4LP	Tel: 0845 885511 Fax: 0845 885522
Bottomline Technologies Europe Ltd 115 Chatham Street Reading Berkshire RG1 7JX	Tel: 0870 0818250 Fax: 0870 0818280
Brother International 100 Somerset Corporate Boulevard Bridgewater New Jersey 08807-0911 USA	Tel: 001 908 704 1700 Fax: 001 908 704 8235  Email: <a href="mailto:Larry@micrtech.com">Larry@micrtech.com</a>
Brother UK Limited Shepley Street Audenshaw Manchester M34 5JD	Tel: 08444 999 444
Checkprint Limited 1 Alan Bray Close Dodwells Bridge Industrial Estate Hinckley Leicestershire LE10 3BP	Tel: 01455 615616 Fax: 01455 233203  Email: <a href="mailto:enquiries@checkprint.co.uk">enquiries@checkprint.co.uk</a> Website: <a href="http://www.tallgroup.co.uk">www.tallgroup.co.uk</a>
CPG International Millars Brook Unit 3 1 <sup>st</sup> Floor Molly Millars Lane Wokingham Berkshire RG41 2AD	Tel: 0118 977 1000  UK Contact: Brian Fortune - 01252 357835 Website: <a href="http://www.genicom.com">www.genicom.com</a>
Delphax Technologies Limited 3/4 Satellite Business Village Fleming Way Crawley West Sussex RH10 9NE	Tel: 01293-551051 Fax: 01293-561079  Email: <a href="mailto:infoUK@delphax.com">infoUK@delphax.com</a>
Heidelberg Graphic Equipment Limited DHV Division 69-76 High Street Brentford Middlesex TW8 0AA	Tel: 0844 892 2010 Fax: 020 8490 3589

Hitachi Data Systems Sefton Park Stoke Poges Buckinghamshire SL2 4HD	Tel: 01753-61800 Fax: 01753-618543  Email: <a href="mailto:info.uk@hds.com">info.uk@hds.com</a>
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Kodak Limited Hemel One Business Centre Boundary Way Hemel Hempstead HP2 7YU	Tel: 01442 261122 Fax: 01442 240609
Konica Minolta Business Solutions (UK) Ltd Konica House Miles Gray Road Basildon Essex SS14 3AR	Tel: 01268 534444 Fax: 01268 644344  Email: <a href="mailto:info@konicaminolta.co.uk">info@konicaminolta.co.uk</a>
Kyocera Mita UK Ltd 8 Beacontree Plaza Gillette Way Reading RG2 0BS	Tel: 01189 311500 Fax: 01189 311108  Email: <a href="mailto:kyoceramita@kyoceramita.co.uk">kyoceramita@kyoceramita.co.uk</a> Website: <a href="http://www.kyoceramita.co.uk">www.kyoceramita.co.uk</a>
Lexmark International Ltd Westthorpe House Little Marlow Road Marlow Buckinghamshire SL7 3RQ	Tel: 0870 444 0044 Fax: 01628-481893
PCF Print Management Ltd (Troy Supplier) Oak House Langstone Business Village Langstone Newport NP18 2LH	Tel: 01633 415570  Email: <a href="mailto:info@pcf.co.uk">info@pcf.co.uk</a> Website: <a href="http://www.pcfdocumentsecurity.co.uk">www.pcfdocumentsecurity.co.uk</a>
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Ricoh UK Ltd Ricoh House 1 Plane Tree Crescent Feltham Middlesex TW13 7HG	Tel: 020 8261 4000 Fax: 020 8261 4004
Source Technologies 2910 Whitehall Park Drive Charlotte NC 28273 USA	Tel: 01280-823819  Email: <a href="mailto:jdurnford@sourcetech.com">jdurnford@sourcetech.com</a> Website: <a href="http://www.sourcetech.com">www.sourcetech.com</a>
TALL Security Print Limited Pembroke Court Manor Park Runcorn Cheshire WA7 1TJ	Tel: 01928 579200 Fax: 01928 579294  Email: <a href="mailto:enquiries@tallgroup.co.uk">enquiries@tallgroup.co.uk</a> Website: <a href="http://www.tallgroup.co.uk">www.tallgroup.co.uk</a>
Tektronix/Safe System Safe International 101/103, Avenue du Gal Leclerc F-75014 Paris France	Tel: 00.01.45.40.54.64 Fax: 00.01.45.40.86.58  Website: <a href="http://www.safe.fr">http://www.safe.fr</a>
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