
Media specifications

Paper and specialty media guidelines

Media guidelines

Media characteristics

The following media characteristics affect print quality and reliability. Consider these characteristics when evaluating new media stock.

Weight

The printer can automatically feed media weights from 60 to 176 g/m² (16 to 47 lb bond) grain long. Media lighter than 60 g/m² (16 lb) might not be stiff enough to feed properly, causing jams. For best performance, use 90 g/m² (24 lb bond) grain long media. For media smaller than 182 x 257 mm (7.2 x 10.1 in.), we recommend 90 g/m² or heavier media.

Curl

Curl is the tendency for media to curl at its edges. Excessive curl can cause media feeding problems. Curl can occur after the media passes through the printer, where it is exposed to high temperatures. Storing media unwrapped in hot, humid, cold, or dry conditions, even in the trays, can contribute to media curling prior to printing and can cause feeding problems.

Smoothness

Media smoothness directly affects print quality. If media is too rough, toner cannot fuse to it properly. If media is too smooth, it can cause media feeding or print quality issues. Always use media between 100 and 300 Sheffield points; however, smoothness between 150 and 200 Sheffield points produces the best print quality.

Moisture content

The amount of moisture in media affects both print quality and the ability of the printer to feed the media correctly. Leave media in its original wrapper until it is time to use it. This limits the exposure of media to moisture changes that can degrade its performance.

Condition media before printing by storing it in its original wrapper in the same environment as the printer for 24 to 48 hours before printing. Extend the time several days if the storage or transportation environment is very different from the printer environment. Thick media may also require a longer conditioning period.

Grain direction

Grain refers to the alignment of the media fibers in a sheet of media. Grain is either grain long, running the length of the media, or grain short, running the width of the media. For 60 to 90 g/m² (16 to 24 lb bond) media, use grain long fibers.

Fiber content

Most high-quality xerographic media is made from 100% chemically treated pulped wood. This content provides the media with a high degree of stability resulting in fewer media feeding problems and better print quality. Media containing fibers such as cotton possesses characteristics that can negatively affect media handling.

Unacceptable media

The following media types are not recommended for use with the printer:

- Chemically treated media used to make copies without carbon paper, also known as carbonless papers, carbonless copy paper (CCP), or no carbon required (NCR) paper
- Preprinted media with chemicals that may contaminate the printer
- Preprinted media that can be affected by the temperature in the printer fuser
- Preprinted media that requires a registration (the precise print location on the page) greater than ± 2.3 mm (± 0.09 in.), such as optical character recognition (OCR) forms
In some cases, registration can be adjusted with a program to successfully print on these forms.
- Coated media (erasable bond), synthetic media, thermal media
- Rough-edged, rough, or heavily textured surface media, or curled media
- Recycled media containing more than 25% post-consumer waste that does not meet DIN19 309
- Media weighing less than 60 g/m² (16 lb)
- Multiple-part forms or documents

Selecting media

Using appropriate media prevents jams and helps ensure trouble-free printing.

To help avoid jams and poor print quality:

- Always use new, undamaged media.
- Before loading media, know the recommended print side of the media. This information is usually indicated on the media package.
- Do not use media that has been cut or trimmed by hand.
- Do not mix media sizes, types, or weights in the same source; mixing results in jams.
- Do not use coated media unless they are specifically designed for electrophotographic printing.

Selecting preprinted forms and letterhead

Use these guidelines when selecting preprinted forms and letterhead:

- Use grain long papers for best results for 60 to 90 g/m² weights.
- Use only forms and letterhead printed using an offset lithographic or engraved printing process.
- Avoid papers with rough or heavily textured surfaces.

Use papers printed with heat-resistant inks designed for use in xerographic copiers. The ink must be able to withstand temperatures up to 180°C (356°F) without melting or releasing hazardous emissions. Use inks that are not affected by the resin in toner. Inks that are oxidation-set or oil-based generally meet these requirements; latex inks might not. When in doubt, contact the paper supplier.

Preprinted papers such as letterhead must be able to withstand temperatures up to 180°C (356°F) without melting or releasing hazardous emissions.

Using media

Using letterhead

Check with the manufacturer or vendor to determine whether the chosen preprinted letterhead is acceptable for laser printers.

Page orientation is important when printing on letterhead. Use the following table for help when loading letterhead.

Process or paper source	Print side	Top of page
Tray 1	Letterhead faceup	Letterhead goes toward the front of the tray
Tray 2	Letterhead faceup	Letterhead goes toward the front of the tray
Duplex (two-sided) printing from trays 1 and 2	Letterhead facedown	Letterhead goes toward the rear of the tray
Multipurpose feeder	Letterhead facedown	Letterhead top edge enters first
Manual feeder	Letterhead facedown	Letterhead top edge enters first
Duplex (two-sided) printing from the multipurpose feeder	Letterhead faceup	Letterhead top edge enters last

Using transparencies

Print samples on the transparencies being considered for use before buying large quantities.

When printing on transparencies:

- From MarkVision™ Professional, the printer software, or the control panel, set the Paper Type to Transparency.
- Feed transparencies from the standard tray (Tray 1) or the multipurpose feeder.
- Use transparencies designed specifically for laser printers. Check with the manufacturer or vendor to ensure transparencies are able to withstand temperatures up to 180°C (356°F) without melting, discoloring, offsetting, or releasing hazardous emissions.
- Use transparencies that are 0.12–0.14 mm (4.8–5.4 mil) in thickness or 161–179 g/m² in weight.
- Print quality and durability depend on the transparencies used.
- To prevent print quality problems, avoid getting fingerprints on the transparencies.
- Before loading transparencies, fan the stack to prevent sheets from sticking together.
- We recommend Lexmark part number 12A8240 for letter-size and Lexmark part number 12A8241 for A4-size transparencies.

Using envelopes

- Print samples on the envelopes being considered for use before buying large quantities.

When printing on envelopes:

- From the control panel, set the Paper Source based on the source in use. From the control panel, the printer software, or MarkVision Professional, set the Paper Type to Envelope, and select the envelope size.
- Use envelopes designed specifically for laser printers. Check with the manufacturer or vendor to ensure the envelopes can withstand temperatures up to 180°C (356°F) without sealing, wrinkling, curling excessively, or releasing hazardous emissions.
- For the best performance, use envelopes made from 90 g/m² (24 lb bond) paper. Use up to 105 g/m² (28 lb bond) weight for envelopes as long as the cotton content is 25% or less. All-cotton envelopes must not exceed 90 g/m² (24 lb bond) weight.
- Use only new envelopes.

- To optimize performance and minimize jams, do not use envelopes that:
 - Have excessive curl or twist
 - Are stuck together or damaged in any way
 - Have windows, holes, perforations, cutouts, or embossing
 - Have metal clasps, string ties, or folding bars
 - Have an interlocking design
 - Have postage stamps attached
 - Have any exposed adhesive when the flap is in the sealed or closed position
 - Have bent corners
 - Have rough, cockle, or laid finishes
- Adjust the width guide to fit the width of the envelopes.

Note: A combination of high humidity (over 60%) and the high printing temperature may wrinkle or seal envelopes.

Using labels

Print samples on the labels being considered for use before buying large quantities. For detailed information on label printing, characteristics, and design, see the *Card Stock & Label Guide* available on the Lexmark Web site at www.lexmark.com/publications.

Note: Vinyl labels are not supported on this product. Use only paper labels.

When printing on labels:

- From the printer software, MarkVision Professional, or the control panel, set the Paper Type to Labels.
- Use only letter-, A4-, and legal-size label sheets.
- Use labels designed specifically for laser printers. Check with the manufacturer or vendor to verify that label adhesives, face sheet (printable stock), and topcoats can withstand temperatures up to 180°C (356°F) and pressure up to 30 psi without delaminating, oozing around the edges, or releasing hazardous fumes. Do not use vinyl labels.
- Do not use labels with slick backing material.
- Use full label sheets. Partial sheets may cause labels to peel off during printing, resulting in a jam. Partial sheets also contaminate the printer and the cartridge with adhesive, and could void the printer and cartridge warranties.
- Do not print within 1 mm (0.04 in) of the edge of the label, of the perforations, or between die-cuts of the label.
- Be sure adhesive backing does not reach to the sheet edge. Zone coating of the adhesive at least 1 mm (0.04 in) away from edges is recommended. Adhesive material contaminates the printer and could void the warranty.
- If zone coating of the adhesive is not possible, remove a 3 mm (0.125 in.) strip on the leading and driver edge, and use a non-oozing adhesive.
- Portrait orientation works best, especially when printing bar codes.
- Do not use labels with exposed adhesive.

Using card stock

Card stock is heavy, single-ply print media. Many of its variable characteristics, such as moisture content, thickness, and texture, can significantly impact print quality.

Print samples on the card stock being considered for use before buying large quantities.

When printing on card stock:

- From MarkVision Professional, the printer software, or the control panel:
 - Set the Paper Type to Card Stock.
 - Set the Paper Weight to Card Stock Weight.
 - Set the Card Stock Weight to Normal or Heavy.

- Be aware that preprinting, perforation, and creasing may significantly affect the print quality and cause jams or other paper handling problems.
- Check with the manufacturer or vendor to ensure the card stock can withstand temperatures up to 180°C (356°F) without releasing hazardous emissions.
- Do not use preprinted card stock manufactured with chemicals that may contaminate the printer. Preprinting introduces semi-liquid and volatile components into the printer.
- Use grain long card stock when possible.

Storing media

Use these media storage guidelines to help avoid jams and uneven print quality:

- For best results, store media where the temperature is 21°C (70°F) and the relative humidity is 40%.
- Store media in cartons when possible, on a pallet or shelf, rather than on the floor.
- Store individual packages of media on a flat surface.
- Do not store anything on top of individual media packages.

Supported sizes

The following tables provide information on standard and optional sources for both input and output trays and bins.

Media Sizes	250 Tray	MPF	Duplex	500 Tray	Manual Feed Slot
A4 210 x 297 mm	✓	✓	✓	✓	✓
A5 148 x 210 mm	✓	✓	✓	✓	✓
JIS B5 182 x 257 mm	✓	✓	✓	✓	✓
Statement ¹ 5.5 x 8.5 in.		✓	✓		✓
Letter 8.5 x 11 in.	✓	✓	✓	✓	✓
Folio ¹ 8.5 x 13 in.	✓	✓	✓	✓	✓
Legal 8.5 x 14 in.	✓	✓	✓	✓	✓
Executive 7.25 x 10.5 in.	✓	✓	✓	✓	✓
Universal ¹ (width)					
123.8 to 215.9 x 355.6 mm; 3.875 x 4.875 to 8.5 x 14 in.		✓			
152.4 to 215.9 x 355.6 mm; 3.875 x 6 to 8.5 x 14 in.		✓			✓
139.7 x 210 to 215.9 x 355.6 mm; 5.5 x 8.27 to 8.5 x 14 in.		✓	✓		✓
148 x 210 to 215.9 x 355.6 mm; 5.83 x 8.27 to 8.5 x 14 in.	✓	✓	✓	✓	✓
7 3/4 Envelope 3 7/8 x 7 1/2 in.		✓			✓
9 Envelope 3 7/8 x 8 7/8 in.		✓			✓
10 Envelope 4 1/8 x 9 1/2 in.		✓			✓
DL Envelope 110 x 220 mm		✓			✓
C5 Envelope 162 x 229 mm		✓			✓

Media Sizes (continued)	250 Tray	MPF	Duplex	500 Tray	Manual Feed Slot
B5 Envelope 176 x 250 mm		✓			✓
Other Envelope					
60.5 to 215.9 mm		✓			✓
97.4 to 215.9 mm					✓
¹ Lower feed reliability might be encountered when using non-standard media sizes.					

Media weight

Size	Type		Weight
Primary tray and 500-sheet optional tray			
Letter, Legal, A4	Xerographic and Bonds	Long Grain	16 to 47 lb (60 to 177 g/m ²)
		Short Grain	24 to 58 lb (90 to 218 g/m ²)
	Recycled	Long Grain	20 to 47lb (75 to 177 g/m ²)
		Short Grain	28 to 58 lb (105 to 218g/m ²)
	Card Stock (long and short)	Cover	50 lb/65 lb (135 g/m ² / 176 g/m ²)
		Index	67 lb/90 lb (120 g/m ² / 163 g/m ²)
		Tag	74 lb/100 lb (120 g/m ² / 163 g/m ²)
	Transparency	0.12 to 0.14 mm 4.8 to 5.4 mil	161 to 179 g/m ²
A5, B5, JIS-B5, Exec., Statement, Folio	Xerographic and Bonds	Long Grain	20 to 47 lb (75 to 177 g/m ²)
		Short Grain	24 to 58 lb (90 to 218 g/m ²)
Multipurpose feeder and manual feed slot			
Letter, Legal, A4	Xerographic and Bonds	Long Grain	20 to 47 lb (75 to 177 g/m ²)
		Short Grain	24 to 58 lb (90 to 218 g/m ²)
	Recycled	Long Grain	20 to 47 lb (75 to 177 g/m ²)
		Short Grain	28 to 58 lb (105 to 218 g/m ²)
	Card Stock (long/short)	Cover	50 lb/ 65 lb (135 g/m ² / 176 g/m ²)
		Index	67 lb/ 90 lb (120 g/m ² / 163 g/m ²)
		Tag	74 lb/ 100 lb (120 g/m ² /163 g/m ²)
	Labels (max)	Paper	35 lb (131 g/m ²)
		Vinyl	Not Supported
Letter, Legal, A4 (continued)	Transparency	Thickness: 0.12 to 0.13 mm	161 to 179 g/m ²

Media weight

Size	Type		Weight
A5, B5, JIS-B5, Exec., Statement, Folio	Xerographic and Bonds	Long Grain	20 to 47 lb (75 to 177 g/m ²)
		Short Grain	24 to 58 lb (90 to 218 g/m ²)
Envelope	Monarch, 7 ¾, #9, #10, DL, B5, C5, C6-C5, C6, B6		16 to 28 lb (60 to 105 g/m ²)
Duplex unit			
A5, B5, Executive, Statement, Folio, Letter, A4 and Legal	Xerographic and Bonds	Long Grain	20 to 32 lb (75 to 120 g/m ²)
		Short Grain	24 to 32 lb (90 to 120 g/m ²)
	Recycled	Long Grain	20 to 32 lb (75 to 120 g/m ²)
		Short Grain	28 to 32 lb (105 to 120 g/m ²)

Input and output capacities

The following table outlines the input and output source capacities by media type.

Source	Media	Maximum height	Approximate reference capacity
Input			
Standard 250-sheet tray ²	Plain paper ¹	54 mm	250 sheets (75 g/m ²)
Optional 500-sheet tray (C52x) or Optional 550-sheet tray (C53x) ²	Plain paper ¹	57.6 mm	500 sheets (80 g/m ²) 550 sheets (75 g/m ²)
Multipurpose feeder ²	Plain paper	10 mm	100 sheets (75 g/m ²)
	Envelopes		10 envelopes (75 g/m ²)
	Other		Various quantities
Manual feed slot	Any media	Single sheet	1 sheet
Output			
Standard 250-sheet output bin ^{1, 2}	Plain Paper	35 mm	250 sheets (75 g/m ²)
	Other		Various quantities
¹ 20 lb xerographic paper at ambient environment ² Capacity may vary and is subject to media specifications and printer operating environment. Note: Paper input is limited to below the input source indicator on the tray.			

Print area

The printable area is limited to within 4.2 mm (0.167 in.) of all edges of the media. Any information placed outside this specified printable area does not print.