

Paper stock for bulk mail fact sheet

This fact sheet is for the guidance of customers, paper mills/merchants and printers, to ensure that your paper stock meets Australia Post's requirements for envelope construction and postcards.

Why paper stock matters

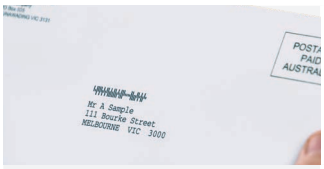
Paper stock for envelopes and postcards is an important consideration as it can affect the ability of Australia Post's high speed letter sorting equipment to process articles.

- Mail articles that are too flimsy, or too thick or rigid, may jam in letter sorting equipment.
- Articles with either very rough or high-slip surfaces may fail to travel through friction feeders.
- Articles with loose fibres or dust may cause buildup and malfunction on the equipment.
- Articles with poor opacity or reflectivity may provide insufficient contrast for the automatic reading of the delivery address or its barcode.
- Articles with coated or non-porous surfaces may result in smearing of the postmarking impression or the fluorescent orange sorting barcodes that Australia Post prints on the front and back of articles.

Mail articles that do not meet the paper stock specifications may be damaged or delayed, and may be ineligible for the lower postage rates which are available for bulk mail services.

Which bulk mail service?

The paper stock requirements vary between some of Australia Post's bulk mail services.



Articles that are addressed with barcodes for:

- PreSort Letters, Promo Post and Charity Mail
- Acquisition Mail
- Domestic letter with tracking Imprint, and
- Registered Post Imprint

have requirements for the physical attributes of the paper stock but allow for a wide range of paper colours.



Other articles for:

- Clean Mail
- Print Post, and
- Reply Paid

must also be on paper or card in a colour that approximates an approved colour.

Paper stock conditions also vary depending on the size of the articles being posted.

For these reasons it's important to know which bulk mail service is being used, and to refer to the relevant **Service Guide** for definitions of the article sizes accepted for each service.

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Paper stock specifications

Paper must be without patterns or pronounced fibres, which may interfere with mechanised sorting equipment.

Articles must be made from a low gloss material with sufficient porosity that will register the imprint of a postmarking impression and permit ink to dry without smudging.

The table below shows the recommended minimum and maximum stock specifications for the production of envelopes (including self-mailers) and cards. Refer to the Service Guides for definitions of Small, Small Plus and Large articles.

Attribute	Envelope paper stock	Card stock
Density: **Small and Small Plus articles**	65 – 110gsm	140 – 500gsm
Density: **Large articles**	65 – 110gsm	240 – 500gsm
Thickness	0.08 – 0.18mm	0.18 – 1.5mm 0.25 – 1.5mm for Reply Paid International (IRP)
Stiffness: machine direction	At least 3.0 mN	30 – 1140 mN
Stiffness: cross direction	At least 1.5 mN	14 – 1140 mN

The majority of cards available at 140 gsm do NOT meet the minimum specifications for thickness or stiffness.

Attribute	Envelope and card stock
Porosity	250 – 1000 ml/min
Tearing resistance	At least 350 mN
Smoothness	35ml/min – 550 ml/min
Opacity	At least 75%
Diffuse reflectance	At least mean of 60% @ 425 – 500 nm At least mean of 70% @ 500 – 700 nm
Coefficient of friction	0.2 – 0.5 (see below)

"Coefficient of friction" describes the relationship of the force of friction between two bodies, and the force pressing them together. Its measurement is a ratio and is relative between two surfaces. For Australia Post the two surfaces are usually two paper mail articles. Relative to each other, the two articles would have a particular coefficient of friction. Mail processing equipment employs material that exerts a higher coefficient of friction on the first article than that of the following article, enabling the machine to pick up one article at a time. The ideal for articles being sorted through Australia Post's equipment is the lowest possible coefficient. The stated range of 0.2 to 0.5 is felt to be ideal for postal machines. Within this stated range, there is sufficient friction to pick a single article from a mail stack but insufficient friction to cause a second article to be picked at the same time.

Paper stock colours

Barcoded services: PreSort Letters, Promo Post, Charity Mail, Acquisition Mail, Domestic letter with tracking Imprint and Registered Post Imprint

There are no restrictions on the article colour for envelopes, postcards or flysheets (for plastic wrapped articles) provided the background against which the barcode is printed meets the following reflectance requirements, also considering the printed barcode and any window material.

Attribute	Specification
Reflectance of: • the printed barcode • the space around the barcode • the window material through which barcodes are scanned.	Barcode reader devices operate within the spectral range of 400 to 650 nanometers. Within this range, the following measurements must be met: • maximum bar reflectance (Rb) is 25 per cent • minimum space reflectance (Rs) is 50 per cent. The reflectance difference (MRD) must be greater than 50 per cent, where MRD is defined as follows: MRD = Rs – Rb > 50 per cent The Print Contrast Signal (PCS) must be greater than 0.75 where PCS is defined as follows: $PCS = \frac{Rs - Rb}{Rs} > 0.75$
Opacity of the substrate	The material on which the barcode is printed (the "substrate") must be opaque, to prevent unwanted information showing through and obscuring the barcode. This requirement is met if the MRD is at least 50 per cent when the material is backed with a black surface having a reflectance below 5 per cent.

All other services

Australia Post recommends white paper or card for your mail articles, but light tints or half-tones are satisfactory. A general test is that the colours should come on or around the following range of 78 acceptable colour tones selected from the Pantone Matching System®.

100	101	106	107	113	114	120	121	127	128
134	135	136	141	142	148	149	155	162	169
176	196	203	217	250	263	277	290	304	317
331	332	337	344	351	358	365	366	372	373
379	386	393	400	406	413	427	434	441	453
454	460	461	467	468	474	475	482	488	489
496	502	503	510	517	524	530	531	538	545
552	559	566	573	579	580	586	587		

The colours shown above are approximations only. Refer to official ink colour charts. Because of the existence of subjective factors such as the varying degrees of colour perception and the varying conditions under which colours are viewed, cases may arise where doubt exists on acceptability of a particular colour. Australia Post can arrange a test, based on the above zone of acceptable colours.

Need to know more?

Australia Post recommends that envelopes and cards comply with Australian Standards for the production of envelopes, Spec 4611 – 1999 (available at: **http://infostore.saiglobal.com**).

Detailed information about each of the bulk mail services is available in a set of Service Guides which can be downloaded from the Australia Post website **auspost.com.au/bulkmail**.

For more information

The information in this fact sheet is a summary only. If you would like more information about paper stock for bulk mail:

- contact your Account Manager
- email **mailpresentation@auspost.com.au**
- go to **auspost.com.au/bulkmail**
- call **13 11 18**
- or write to:
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  STRAWBERRY HILLS NSW 2012

Although every effort has been made to ensure the accuracy of the contents of this Fact Sheet at the time of publication, information is updated from time to time and may be subject to change.

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