



ROYAL MAIL

APPENDIX G

USING OPTICAL CHARACTER RECONGITION OCR

Appendix G: Using Optical Character Recognition (OCR)

1. Introduction

This technical specification defines the features of a mail piece eligible for the OCR service. Any feature of a mail piece design that does not comply with this specification is not permitted unless it has been tested and approved by Royal Mail prior to posting.

This specification is in essence the standard for 'normal' paper, and – unless you use an unusual type of paper – your items will probably comply. Issues such as colour, design and layout of items are covered later in this Appendix. During design, printing and enclosing, you should take into account the various tolerances associated with these processes to ensure that every mail piece within your mailing adheres to these requirements.

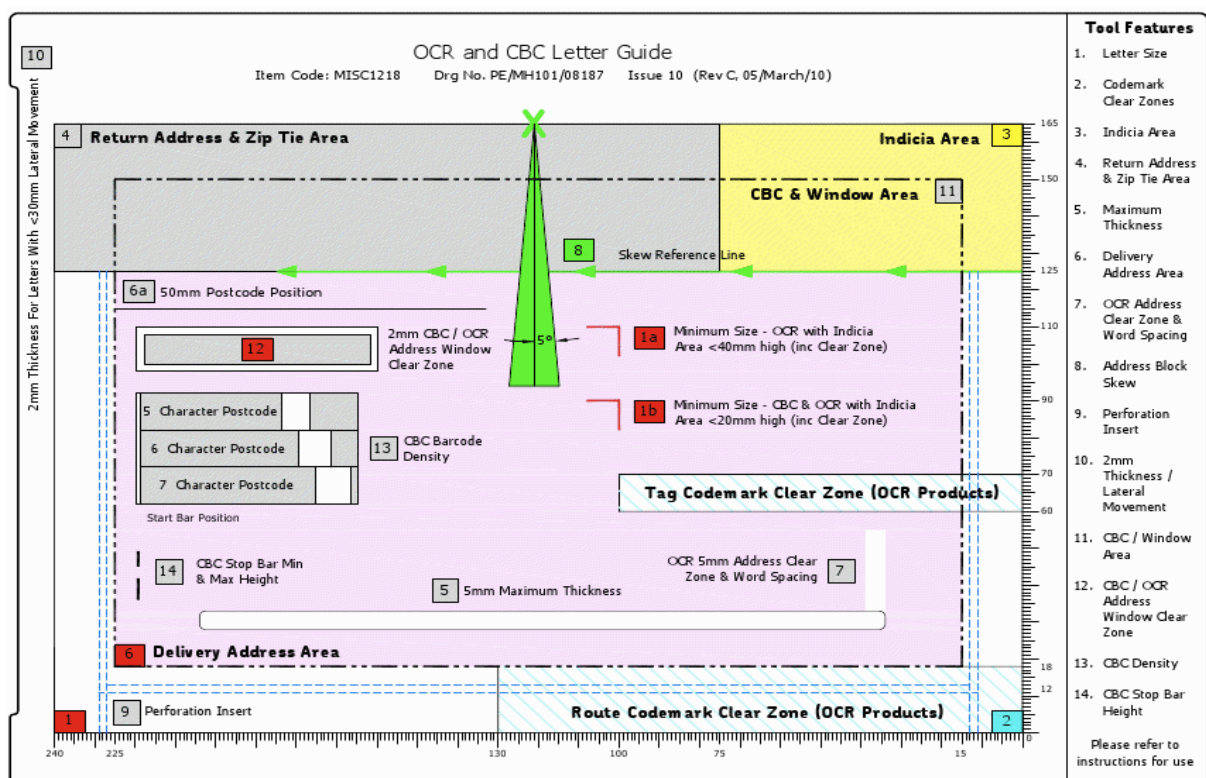
OCR mail is processed by machines which operate at high speeds. These machines integrate stacker feeder systems, belts and pulleys to process and sort the mail through its journey prior to delivery. The sorting process requires mail pieces to be presented and processed through different machines on several occasions (as many as five or six times) so it is necessary that each mail piece is within the physical and material parameters of the specification so it achieves efficient processing with no damage to the machine or mail piece.

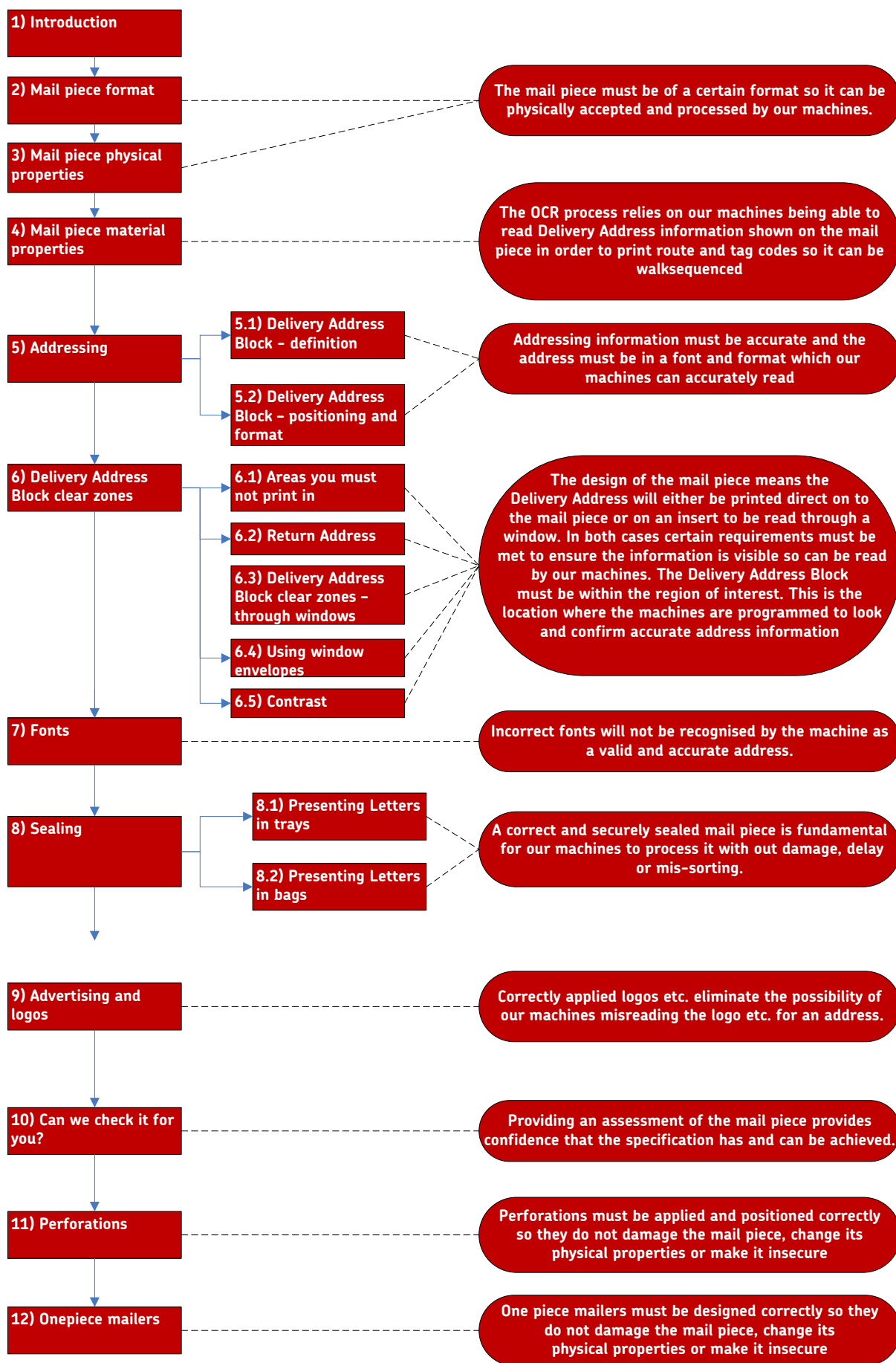
This Appendix has been broken in to sections representing the key stages of mail piece creation with each section setting out the specification requirements. The flow chart on the next page is designed to provide a high level summary of order and content of these processes with additional explanatory information to help understand why specific attributes are required.

J tools and supporting guidelines are provided free of charge and should be used to quality check mail pieces through design and production stages.



Figure 60:OCR J tool



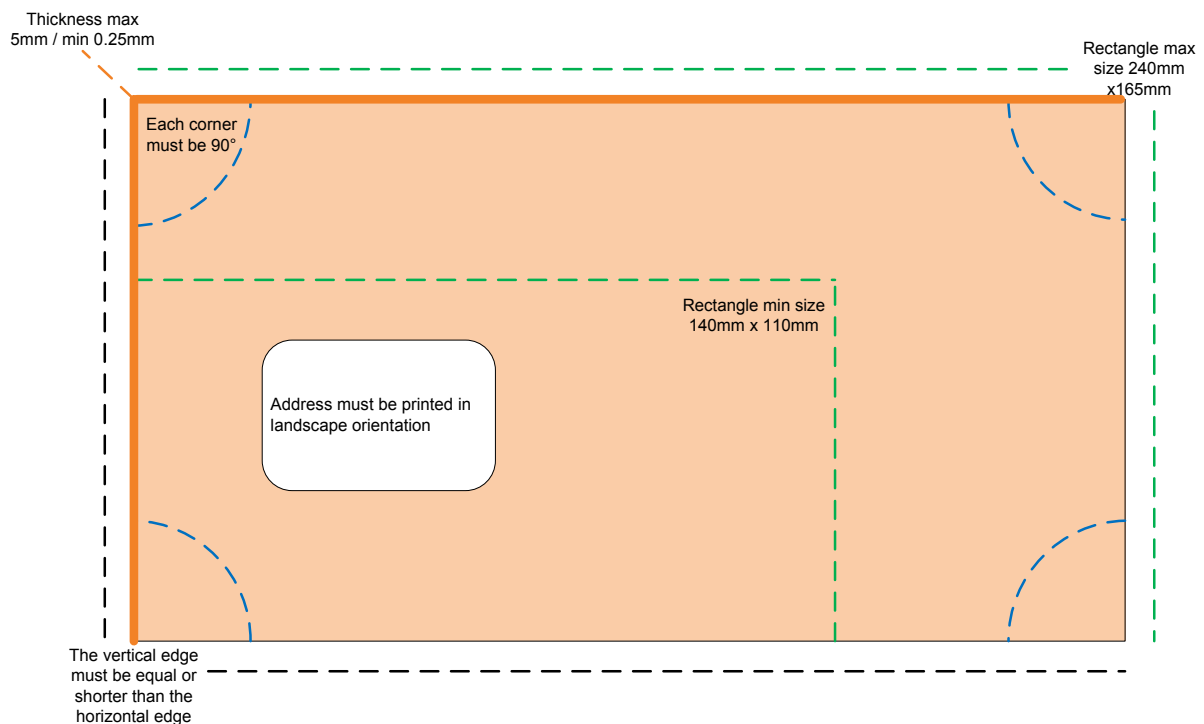


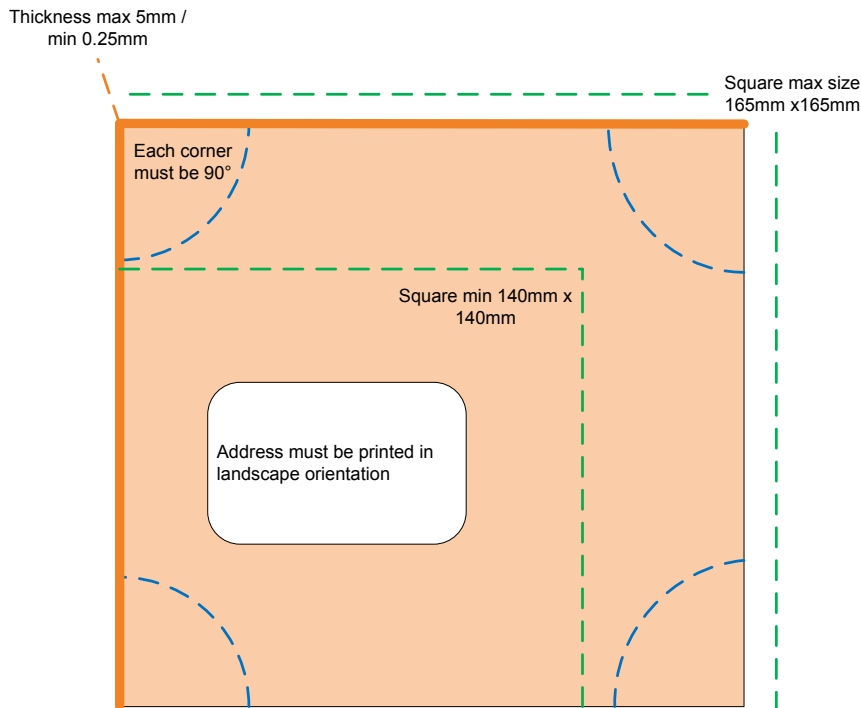
2. Mail piece format

What kind of items you can send? For Mailing Items to comply with OCR, each mail piece must comply with a range of physical parameters.

Mail piece format	Physical requirements
Size	Rectangular items: <ul style="list-style-type: none"> Maximum size 240mm x 165mm (C5+) Minimum size 140mm x 110mm Square items: <ul style="list-style-type: none"> Maximum size 165mm x 165mm Minimum size 140mm x 140mm
Weight	<ul style="list-style-type: none"> Maximum 100g
Thickness	<ul style="list-style-type: none"> Maximum 5mm Minimum 0.25mm
Shape	<ul style="list-style-type: none"> Rectangular (oblong) or square All four sides must be straight Each corner must be 90° The vertical edge must be equal to or shorter than the horizontal edge Items printed in 'portrait' format are not allowed

Figure 61:format





3. Mail piece physical properties

3.1. Flexibility

Mailing Items must be flexible enough to be capable of being processed in our sorting machines without damage to the machine, the Mail Item or other Mailing Items. Each Mail Item must, therefore, be capable of being transported around a pulley with a radius of 140mm with a maximum force of 26 Newtons. Items that are too stiff will not be able to meet this requirement, as shown in figure 63.

Figure 62: Flexibility test – pass

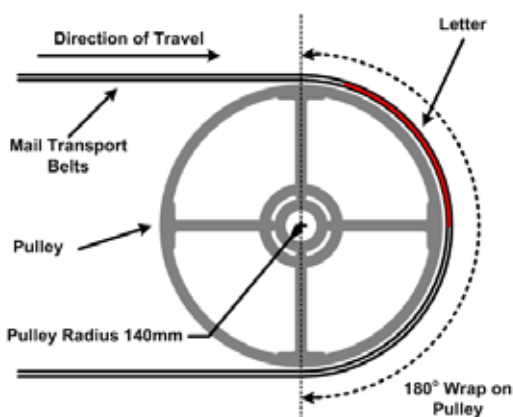
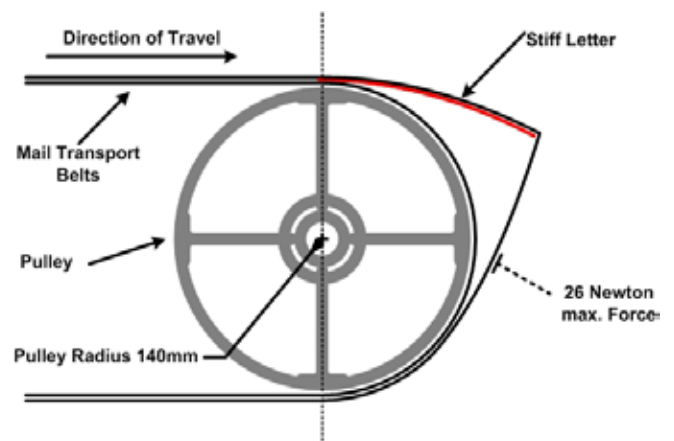


Figure 63: Flexibility test – fail



3.2. Inserts

An insert is defined as anything that is inserted or enclosed into a mail piece. Items such as pens, keys gifts etc. that are inserted in mail pieces must not alter the properties of the mail piece such that the mail piece falls outside of the OCR automation requirements. Typically the significant factors affected are stiffness, thickness, and insert movement.

For any insert other than paper contents, you must make sure they are fixed in position so they do not move around during processing. You can use glue or self- adhesive tabs to fix any inserts

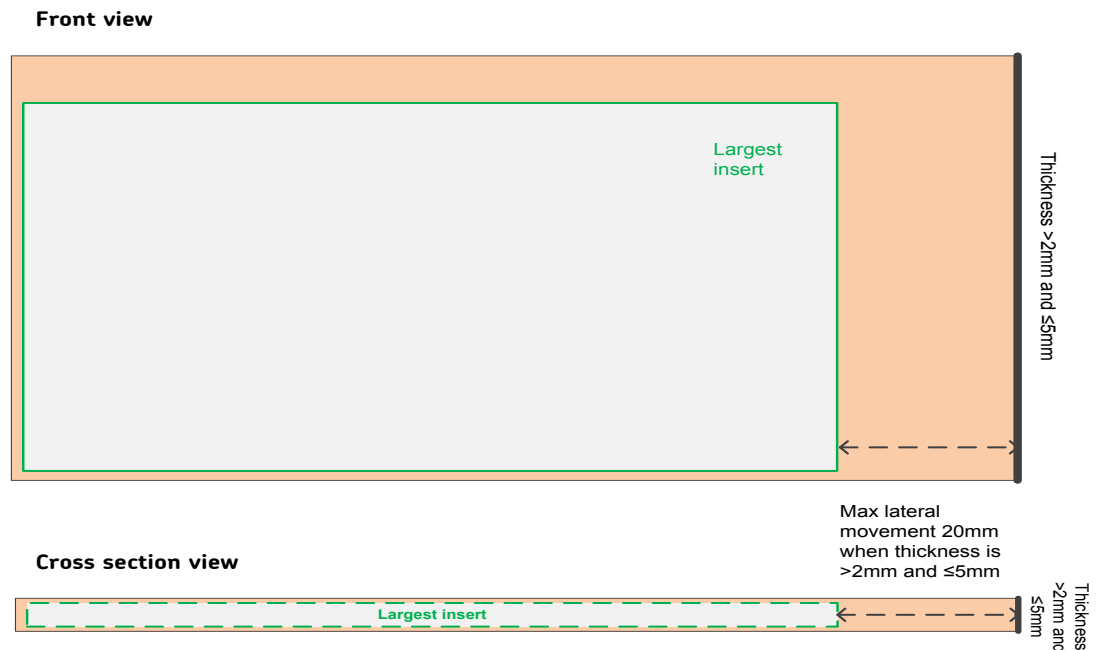
No metallic items should be contained within the mail piece with the following exceptions:

- staples maximum size 24mm by 6mm
- paper clips maximum size of 23mm length

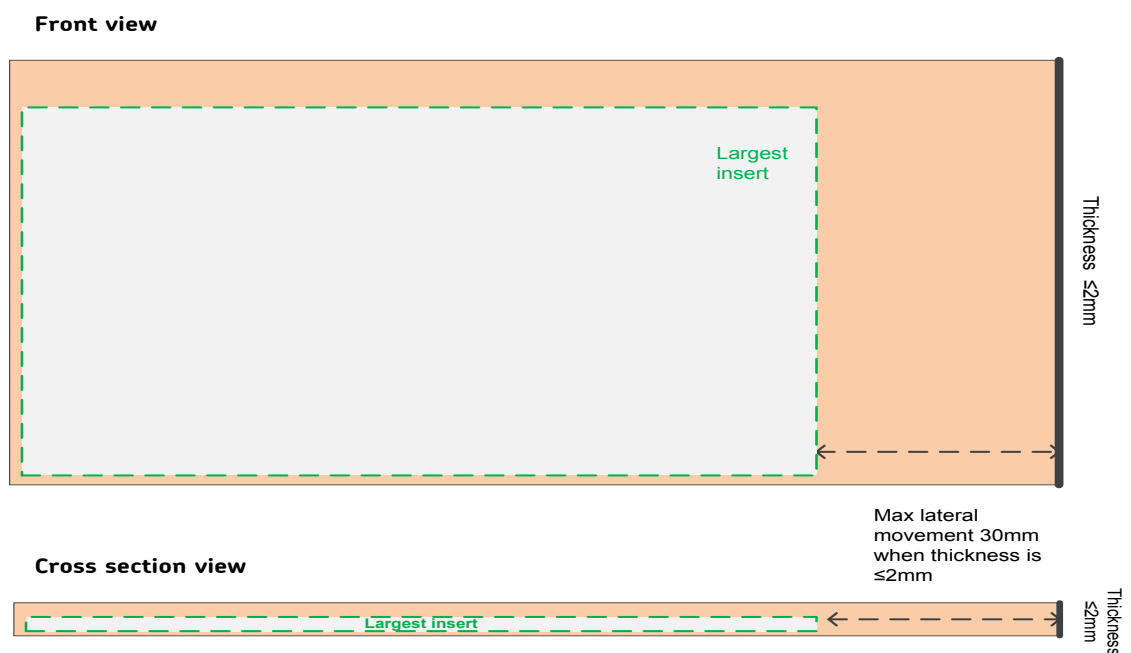
3.3. Lateral movement

The maximum amount of lateral movement of the largest insert within the envelope must not exceed 20mm.

Figure 64:Lateral movement



Where the overall total mail piece thickness does not exceed 2mm, the maximum allowable largest insert movement is 30mm.



4. Mail piece material properties

Paperweight – grammes square meter (gsm)

- Envelopes: 70gsm minimum.
- Postcards: 200gsm minimum with a minimum thickness of 0.25mm thick

Material

Envelopes must be paper based; you must not use polythene, plastic or transparent items, or aperture envelopes (i.e. windows envelopes without a film)

Opacity

The paper on which the address is printed on must be equal to or more than 85% opaque to prevent any character on the reverse side showing through.

Porosity

Porosity value less than 700ml/minute

Absorbency

Absorbency value required 15-35gsm of water in one minute.

Paper colour

The most suitable colours for your mail pieces are white, cream or buff. Other colours are possible so long as they are light or pastel shades and contrast by at least 50% (55% where the address is read through a window) in tone with the address. Use of red or dark colours is not allowed, as it makes it difficult for our machines to read the address or codes.

Background Reflectance (BR) and Reflective Difference (RD)

In order to provide sufficient reflectance from the mail piece material that allows sufficient light to be reflected back, a BR value of a minimum of 35% in the red region (600nm) is required. Mail pieces not meeting this requirement will appear as a block of dark grey or even black, making it impossible to identify the address on the mail item.

In order to provide sufficient contrast between the mail piece material and the printed address, the Reflective Difference between the mail piece background and the printing reflectance (PR) must be a minimum of 30%. Mail pieces not meeting this requirement will appear as block making it extremely difficult to distinguish the address from the mail piece material.

5 Addressing

5.1 Delivery Address Block - definition

The Delivery Address Block is defined as an imaginary rectangular box which surrounds the address, as illustrated in figure 65, and touches the extremities of the text on each side. It may consist of up to 2 elements:-

1. Mailer Defined Information (MDI)⁴ reference information. This is optional and if used must be in the line immediately above the addressee.
2. The Delivery Address must be included and is comprised of the following:
 - Addressee Elements – This may include the relevant punctuation
 - Geographic address – The information in the address must correspond with the information in PAF®. Only punctuation that appears in the corresponding PAF® record may be included.

The Delivery Address element must be printed in only one type and size of font.

⁴ The MDI does not have to be part of the Delivery Address Block; it is preferred to be elsewhere on the mail piece outside of any clear zones

Figure 65: Delivery Address Block



Mailer Defined Information.

Customers wishing to print the MDI as part of the Delivery Address Block may print it in a different font and different size from that used in the Delivery Address element. The data must be in a type face and may comprise of letters, numerals, punctuation marks, ideograms and symbols. Barcodes are not permitted. All spaces between all lines within the Delivery Address Block including the MDI must be the same.

5.2 Delivery Address Block – positioning and format

- All lines of the Delivery Address Block must be justified left.
- The address can appear anywhere in the pink shared area as shown in figure 79. It must be at least 15mm from the top, left and right edges and at least 18mm from the bottom edge.
- The extremities of the Delivery Address Block must be at least 2mm away from the edge of the label or window.
- Additionally, there must be 5mm clear zone around the Delivery Address Block that is free from text, graphics or patterns.
- Excessively skewed addresses cannot be read. OCR can only tolerate a maximum skew of plus or minus 5 degrees from the horizontal.
- All punctuation may be omitted from all parts of the Delivery Address.
- Punctuation, if included within the Delivery Address, must remain restricted to the punctuation that appears within the corresponding PAF® record. Do not use punctuation in abbreviations such as 'St' for 'Street' or 'Rd' for 'Road'.
- Punctuation may be used in the Mailer Defined Information (MDI) and/or the addressee's name or the addressee's title. For full details on allowable punctuation within a PAF® record please see PAF® Digest available from www.royalmail.com, or your Access Account Manager.
- The preferred address format is where each line of the address element is on a separate line and the Postcode must be on the last line of the address. Please see [Appendix A](#), Addressing Mailing Items, for 'Elements of Address and Address Structure'. Please note that the requirement for "no other text/information on the face of the mail item that could be construed as an address" includes any areas of an insert which may appear in the window of the mail item arising from the insert movement.
- The Country name (United Kingdom, Great Britain, England, etc.) must not be used.
- The Postcode must be in capital letters and contain either one or two spaces between the two parts

6 Delivery Address Block clear zones

6.1 Areas you must not print in

You must leave the following areas clear of any markings. These areas are called 'clear zones', and are used by our machines to print and read codes on Mailing Items and locate the address. You must leave clear zones in the following areas.

- 5mm around the Delivery Address Block.
- 18mm from the bottom edge and 130 mm from the right edge. This is for Royal Mail route code marking.

- A zone 100mm from the right hand edge and 10mm high, with the zone's top edge starting 70mm from the bottom edge of the item. This is for Royal Mail tag code marking.
- The address may appear anywhere within the pink shaded Delivery Address Block Area (shown on the OCR template at figure 60)
- No part of the address may fall within 40mm of the top of the mailpiece. However, if you cannot meet this requirement, then as long as there is no other print or graphic on the envelope that could be construed as an address, and providing the address conforms to PAF®, the Delivery Address Block may encroach in to the 40mm, clear zone as long as the last line of the Delivery Address Block is no nearer than 50mm from the top of the mailpiece.

The clear zone around the Delivery Address Block must be at least 5mm as shown in figure 66. The Delivery Address Block must be at least 5mm away from any print or graphics. The left, right and bottom edges of the Delivery Address Block must be at least 2mm away from the window edge. Additionally, there must be 5mm clear zone between the left, right, top and bottom edges of the Delivery Address Block and any print, graphics or patterning on the envelope or any other surrounding material.

Figure 66: Delivery Address Block clear zones



6.2 Return Address

- Each item must bear a UK Return Address
- A Return Address should go on the reverse of the Mailing Item and it must be wholly in an area no more than 40mm from the top of the mail piece. It is preferred that it is positioned central from either side and be structured as left justified.
- In exceptional cases if a Return Address is on the front of the mail item it must be wholly in an area no lower than 40mm from the top of the mail item and no less than 75mm from the right hand edge of the envelope. This will prevent our automation equipment from sorting the mail item to the return address
- The Return Address must be identified as a Return Address and it is recommended that the Return Address be preceded by the words 'Return Address';
- The Return Address must be a valid PAF® address; and
- It is recommended that the font and point size used are either 'Lucida Console' or 'Letter Gothic' fonts of 10-12pt

6.3 Delivery Address Block clear zones – through windows

When window envelopes are used, the total clearance around the Delivery Address Block remains unchanged at or more than 5mm, but this may consist of clear zones both within the window and on the envelope. Figure 67 shows how the 5mm zone can be constructed.

Figure 67: Delivery Address Block clear zones



There must be a minimum of at least 2mm between the left, right, and bottom edge of the Delivery Address Block and window edge. No clear zone is required within the window above the Delivery Address Block, but the Delivery Address, must always be visible.

We recommend the addressee details remain in view but we will accept the addressee details tapping right up to the edge of the window or they can tap out partially or wholly to the top of the right providing that the remainder of the Delivery Address remains wholly visible.

Where a MDI is printed as the top line of the Delivery Address Block the MDI may tap cleanly and completely out of the window providing that the remainder of the Delivery Address Block remains completely visible. These requirements apply at all times including after the Mailing Item is tapped on any of its four edges to induce maximum insert movement.

The remaining clear zone requirements may be met through the provision of clear zones on the envelope i.e. a clear zone which is free of print, graphics or patterning of at least 3mm to the left, right, and bottom of the Delivery Address Block; and a clear zone of at least 5mm on the envelope above the Delivery Address Block.

6.4 Using window envelopes

Windows may be included on envelopes for a variety of reasons so it is necessary to ensure that the inclusion of a window(s) does not physically impact the mail piece in such a way that may prevent our machines from processing it. The following window options only are permitted;

Option to have a window on the front	Option to have a window on the back	Example of use	Requirements
✓		The address is read through the window	See section 6.4.1
	✓	The address is printed on the front of the envelope and the window on the back is used for non-address information.	See section 6.4.2
✓	✓	The address is read through the window on the front and the window on the back is used for non-address information	See section 6.4.3

The front face is defined as the side containing the indicia and the Delivery Address

6.4.1 Address is read through a window

If you intend your address to be read through a window, please follow these requirements:

- Windows must be rectangular in shape, and each corner of the aperture must be radiused
- The window must not interfere with the clear zones for the Royal Mail route and tag codes. (Please see figure 60)
- The window position must be at least 15mm from the top, left and right edges of the envelope, and at least 18mm from its bottom edge.
- The maximum gloss value of the window material must be equal to or less than 150 when measured at 60° in accordance with ASTM 2457 Standard test method for specular gloss of plastic films.
- The window haze should be equal to or less than 75% in accordance with ASTM D1003-00 Standard test method for haze of plastic films.
- The window envelope material must be robust enough not to become deformed and fixed to the envelope evenly across the surface area it is in contact with.
- The item inside the envelope must fit securely, and not move around. The Delivery Address must always be fully visible with a 5mm clear zone around the Delivery Address Block at all times which is free from text, graphics or patterning.
- The number of windows on a single mail item must not exceed two.
- The windows must not exceed 50% of the surface area for one face of the mail item and must appear on the front of the mail item (the same side as the address). The windows must not infringe on any of the clear zones on the mail item (Please see figure 60 OCR template)

6.4.2 Addresses printed direct on to the mail piece

If you intend your address to be printed on the front of the envelope and include a window on the reverse for non-address information please follow these requirements;

- Only one window is permitted.
- The window must not exceed 50% of the surface area
- The window envelope material must be robust enough not to become deformed and fixed to the envelope evenly across the surface area it is in contact with.

6.4.3 Windows on front and back of envelopes

Envelopes with a window on each side, one on the front and one on the back can only be used if the following requirements are met;

Mail piece Physical Properties

- Minimum mail piece length is 212mm (maximum is 240mm)
- Maximum thickness 1mm
- Paper inserts only
- Maximum weight 20g

Window Properties

- The window on the front face must be rectangular with a maximum size of 90mm length and 45mm height. It must be positioned so it does not interfere with any required route and tag clear zone
- The window on the back must be circular with a maximum diameter of 48mm. The perimeter of the window must be 31mm ± 2mm from the bottom of the envelope and centred along the long edge.

6.5 Contrast

Printing

The address must be darker than the paper. For example don't print the address in white ink on dark paper. Please do not print text behind the address, as our machines cannot read against it. There must be a minimum of 50% contrast ratio (55% for addresses behind windows) between the print of the address and the background.

Background

Printing or embossing of security backgrounds, if essential, should be faint, of uniform consistency and be on the inside of the envelope. The contrast factor must not be greater than 10%.

7 Fonts - which Typeface to Use?

Using Optical Character Recognition – OCR – enables you to print your addresses in a typeface that our sorting machines are able to read, by breaking each line down into separate characters or words and looking for vertical white paths between them.

However, in order for OCR to function properly, only certain fonts can be used and print quality must be of a certain standard. For example, using typefaces that are more unevenly spaced than others (or printing labels on a printer where the ink is running low) may cause the item to be rejected and us having to resort to manual sorting mode – which can cause delay and affect the Access Charge

There are a variety of fonts you can use, though we would recommend using one from the list shown wherever possible. We would also recommend you regularly check the quality of your print output for clarity. If you have any doubts on either of these requirements, please contact your Access Account Manager.

Fonts	
Addressing in title case is preferred (with the Postcode always in capitals) The ampersand character may be used All fonts can be in 10pt-12pt	
Acceptable Non-Proportionally Spaced Fonts	Acceptable Proportionally Spaced Fonts
Courier	Arial
Courier New	Avant Garde
Letter Gothic	Calibri
Lucida Console	Estrangelo Edessa
Lucida Sans Typewriter	Eurostile
OCR B	Frankfurt Gothic
Word Gothic	Franklin Gothic (Book)
	Gautami
	Geneva
	Gill Sans
	Helvetica
	Latha
	Lucida Sans
	Mangal
	News Gothic MT
	Univers
	Optima
	Ravi
	Shruti
	Trebuchet MS
	Tunga
	Univers
	Verdana

Typefaces with the following characteristics are also suitable:

- Size – Height: 2mm min - 7mm max. Width: 7mm max.
- Dimension – minimum ratio of lower case height (b) to upper case height (a) of between 2:3 and 3:4. A ratio of width (c) to height (a) of approximately 2:3.



- **Consistency** – each and every line of the delivery address (including the addressee's name) must be in the same typeface and point size.
- **Quality** – characters must be complete, clear, uniform and of high resolution, with individual stroke thickness of between 8% and 16% of the height of the character.
- **Contrast** – there should be a contrast between the characters and the background on which they are printed of at least 50% (55% if it is to be read through a window).
- **Character spacing** – there should be a fixed pitch of between 10 and 12 characters per inch (or between 15 and 10 point size), with clear vertical gaps of at least 0.25mm between the extremities of adjacent characters. If you are using proportionally spaced text, please ensure you keep spacing of at least +0.75, as this significantly improves the rate at which addresses can be read.
- **Line spacing** – allow uniform spacing between all lines of the address, of between 1mm and 4mm (measured from descender to ascender). There should be no blank lines.

Please note; OCR machines can read anything up to 64 characters per line (including spaces). OCR cannot recognise computer zero (Ø). Script type or italic typefaces also cannot be read.

Things to avoid

The following are typical problems, which can prevent your mail from being processed by an OCR machine.

- Characters with incorrect proportions



- Quality of characters – which are poorly printed or defined, either because they have been printed by low quality printers or low resolution dot matrix printers, or because the printer needs maintenance (e.g. worn ribbon, low on toner/ink etc.).



- Characters with poor outlines – fuzzy or blurred, or strokes which are incomplete, broken or smeared, for any of the above reasons.
- Close character spacing – characters which touch adjacent characters, whether on the same line or those from above or below.



- Proportionally or unevenly spaced text – characters or words that have too much space between them the spacing between words must be less than 5mm.



- Typeface styles – bold, italic, inclined graphic, pseudo-script or handwriting limitations. Typefaces with excessive serifs, which touch or overlap adjacent characters or serifs. Generally, sans-serif fonts are preferable to serif fonts.



Print contrast – printing white type on a black background or similar, or combinations of colours such as black print on a strong red background

8 Sealing

All items must be securely sealed on all sides, taking care to avoid too much gum. Envelope flaps may fold either to the back or front of the mailpiece. If the flap folds to the front (address side) of the mailpiece, the edge of the flap must not fall within the clear zones required for route and tag codes.

- You must not use metal clips or staples.
- The items must be sealed on all sides securely and continuously

One Piece Mailers are permitted, please contact your Access Account Manager for the full specification.

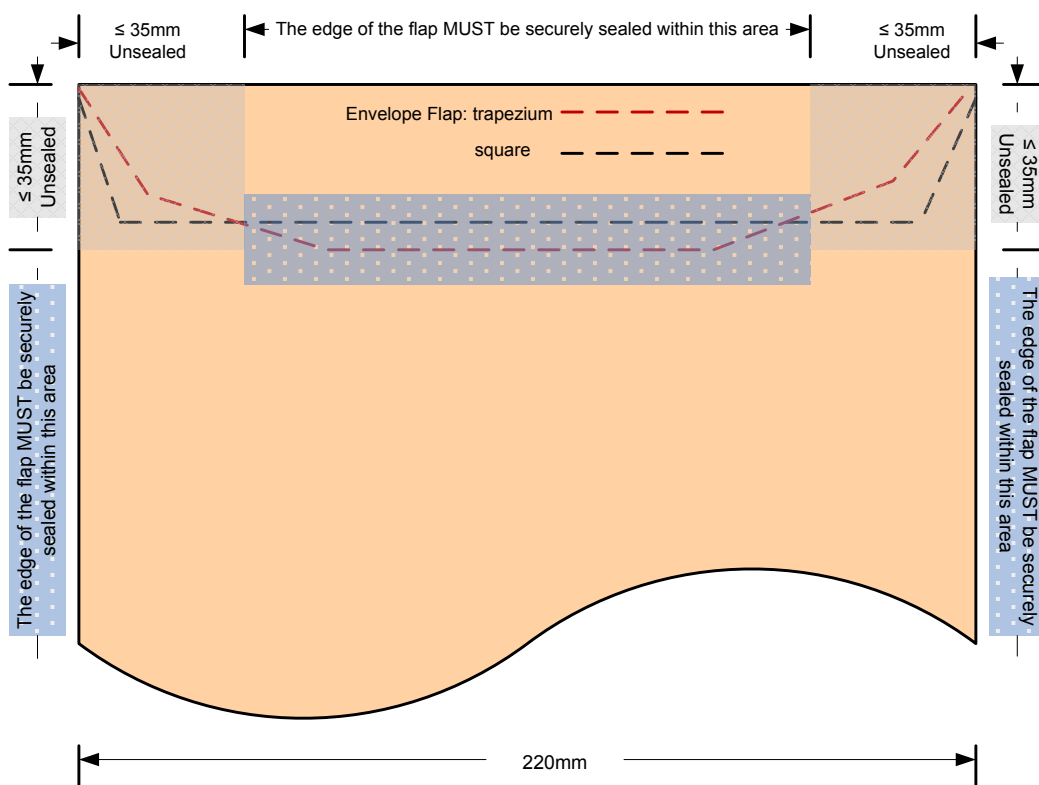
Sealing Tolerances

Opening Flaps must be sealed as far along the edge as possible. All remaining edges must be sealed.

8.1 Letters presented in trays

For DL and C5 Letters with rectangular or trapezium shaped opening flaps presented in trays only, there is a maximum tolerance of up to 35mm from the left and right edges and 35mm from the top edge (as illustrated in figure 68) where the flaps do not have to be sealed⁵

Figure 68:Sealing for mail in trays

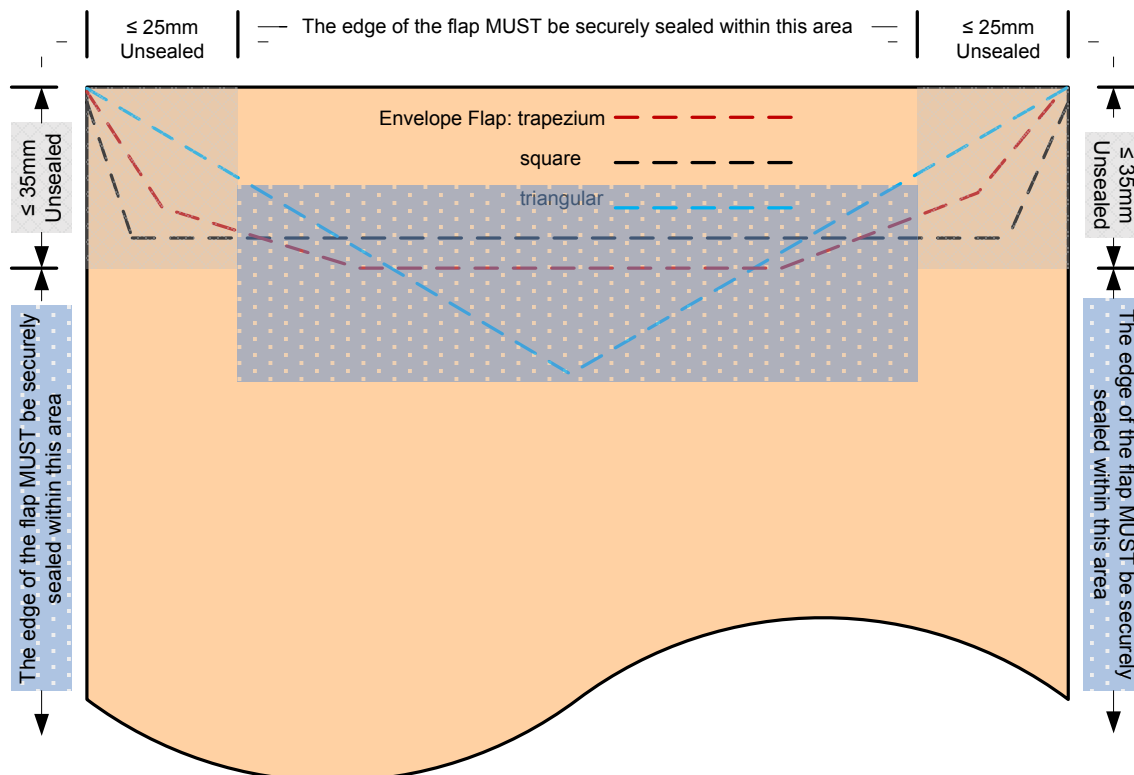


8.2 Letters presented in bags

For all other Letter sizes there is a maximum tolerance of up to 25mm from the left and right edges and 35mm from the top edge (as illustrated in figure 69) where the flaps do not have to be sealed.

⁵ An envelope manufacturing tolerance of 2mm is permitted i.e. the minimum Letter length here is 218mm.

Figure 69: Sealing for mail in bags



9 Advertising, logos and other devices

These can be used so long as they do not fall into any of the clear zones. They must not look like an address or a barcode

10 Can we check it for you?

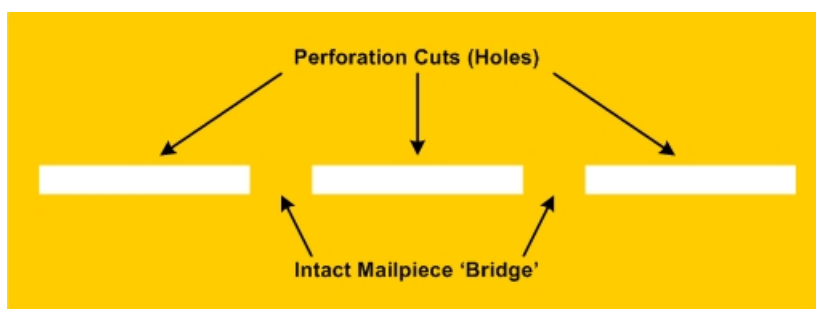
Once you have passed the Quality Assurance process, if you are unsure whether a particular mailpiece complies with all the conditions, why not send us a sample in advance. We will advise you of any problems, and suggest ways of redesigning it. Please contact your Access Account Manager.

11 Perforations

Perforations are defined as a series of holes in a mailpiece to make opening easy. The “cut” is the hole and the “bridge” is the paper that is left intact and subsequently torn when the mailpiece is opened

Roulette and Zip Tie perforations are acceptable, and requirements for these perforations types are provided in the following section. Please see figure 70 for elements of a perforation.

Figure 70: Perforation elements

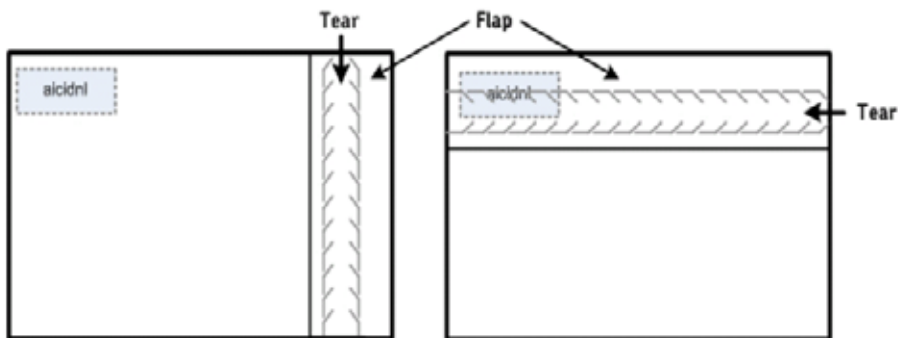


11.1 Zip Tie Perforations

Zip Tie perforations are acceptable subject to the following requirements

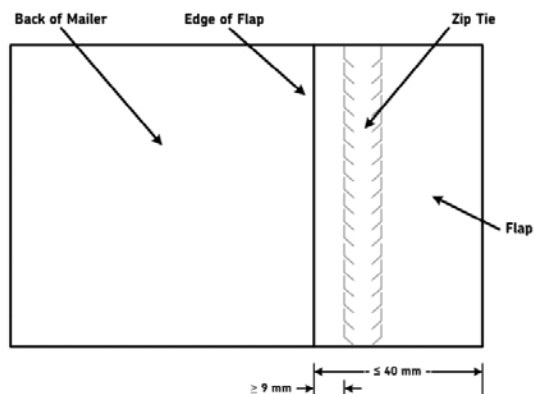
- Only one Zip Tie is permitted on each mailpiece
- The Zip Tie must be die cut into the mailpiece;
- The paper weight for the mailpiece must be ≥ 150 gsm;
- The mailpiece must be presented in landscape orientation only;
- The Zip Tie must always be placed on the back of the mailpiece;
- The Zip Tie may be positioned either horizontally or vertically, but the 'Tear' direction of the Tie is dependant upon the orientation of the mailer. Figure 71 illustrates the back of a landscape orientation mailpiece, the orientation and 'Tear' directional requirements (the relative position of the Access Indicia on the front of the mailpiece being illustrated);

Figure 71: Zip tie orientation



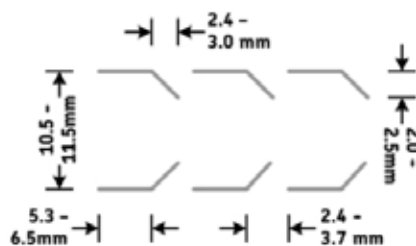
- The Zip Tie must be located on a flap that is ≤ 40 mm wide as illustrated in figure 72;
- The Zip Tie must be positioned ≥ 9 mm from the edge of the flap as illustrated in figure 72;

Figure 72: Zip tie envelope flap



- The dimensional requirements for the cut of the Zip Tie are provided in figure 73 below;

Figure 73: Zip tie dimensions



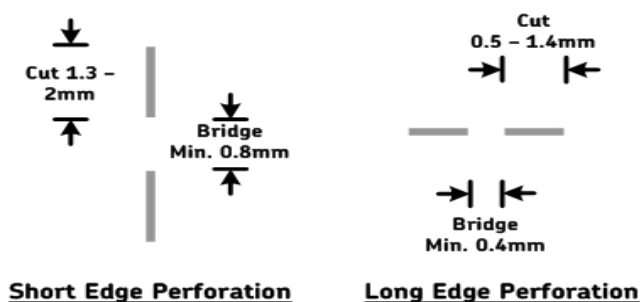
- All cuts and bridges must be of uniform size;
- The cuts must be rectangular in shape and have a width of $\leq 0.1\text{mm}$;
- The glue used to seal the flap must not run out onto the outside of the mail item or produce protruding mounds on the mail item;
- The glue must be fully cured prior to presentation to Royal Mail;
- The tensile strength of the glue must be $\geq 4.5\text{N}$ and fibre tear must be exhibited on separation.

11.2 Roulette Perforations

Acceptable requirements for Roulette perforations are as follows:

- The perforations must be die cut into the mailpiece;
- The minimum paper weight must be $\geq 100\text{gsm}$;
- The mailpiece must be in landscape orientation only;
- Perforations can only be present on any 3 sides, with only one of those sides being either of the longest sides;
- The perforations must be inset from the edge of the mailpiece by $12 \pm 1\text{mm}$;
- The cut of the short side perforations must be set at $1.3 - 2\text{mm}$ and with a bridge of $\geq 0.8\text{mm}$ as illustrated in figure 74. All cuts and bridges must be of uniform size;
- The cut of the long side perforations must be set at $0.5 - 1.4\text{mm}$ and with a bridge of $\geq 0.4\text{mm}$ as illustrated in figure 74. All cuts and bridges must be of uniform size;
- The cuts must be rectangular in shape and have a width of $\leq 0.1\text{mm}$;
- The short side perforations must extend from the edge of the envelope;
- The long side perforations must not extend beyond the short side perforations;
- The indicia must not be printed over the perforations;
- No other colour must be visible through the perforations in the Tag and Route Codemark Clear Zones;
- The perforated edges must be securely sealed all round from the perforation to the letter edges;
- The glue must not run out onto the outside of the mail item or produce protruding mounds on the mail item;
- The glue must be fully cured prior to presentation of the mailing to Royal Mail;
- The tensile strength of the glue must be $\geq 4.5\text{N}$ and fibre tear must be exhibited on separation.

Figure 74: Perforation dimensions



11.3 Pressure seal envelopes incorporating Roulette Perforations

A Pressure Seal Envelope is a single sheet of paper which has been folded either two or three times to make a DL or C5 size mailpiece. The short sides need to be sealed and are opened by means of a standard perforation. One long side has to be a fold, the other will be sealed and have effectively a 'double' perforation to allow the item to be fully opened. The short sides have perforations through all layers of the letter (there will be 3 layers of paper for DL or 2 layers of paper for C5 size mailpieces). The long side has a Roulette perforation that does not go through to the front of the mailpiece. The item is opened by removing the short edge perforated strips first and then tearing back the tear off strip on the reverse.

Design & general requirements:

- The item is produced from a single sheet of paper
- Inserts are not permitted
- DL design must be $> 100\text{gsm}$ (3 ply)
- C5 design must be $> 150\text{gsm}$ (2 ply)

- Landscape permitted
- Perforations to be on both short sides
- The Roulette Tear strip to be on the back of the letter
- The longest edge from the indicia must be a fold (bottom edge for Landscape, left side for portrait)

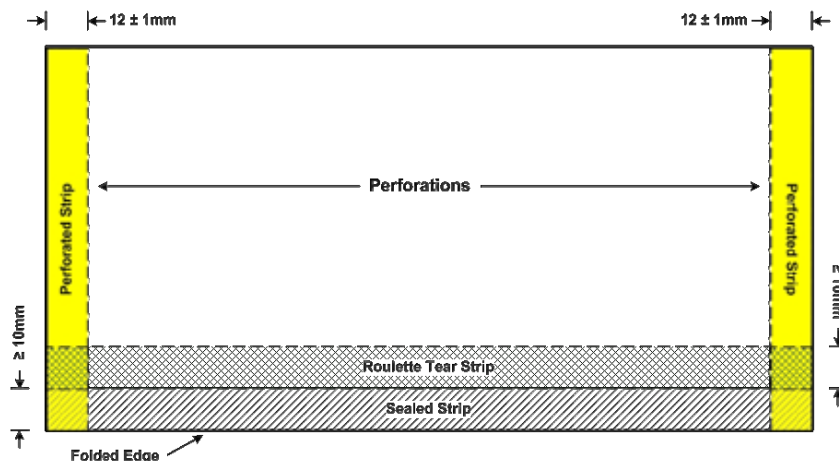
Perforated strip (short edges):

- The cut of the Perforated Strip perforations must be set at 1.3mm – 2mm and with a bridge of $\geq 0.8\text{mm}$
- The cuts must be rectangular in shape and have a width of $\leq 0.1\text{mm}$.

Perforated strip (long edge on reverse):

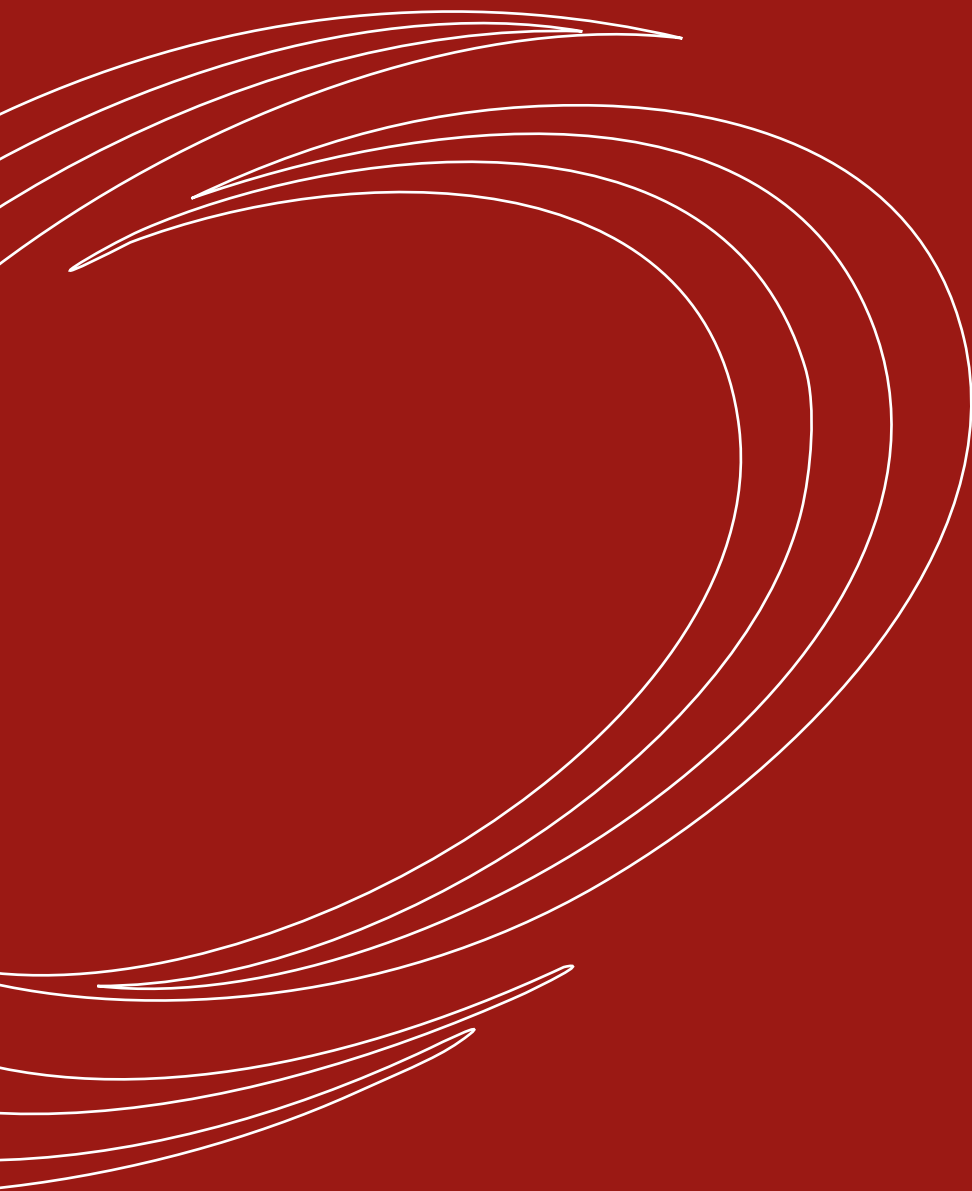
- Only one Roulette Tear strip is permitted on each letter
- It must be die cut into the letter
- It must be placed on the back of the letter (i.e. the side which does not have the Delivery Address and PPI) and must run parallel to the long edge
- It must be $> 10\text{mm}$ from the long edge of the letter & must be $> 10\text{mm}$ wide
- The cut must be set at $< 3.3\text{mm}$ and with a bridge of $> 0.6\text{mm}$ as illustrated in figure 75 below.
- Each cut must be of uniform size
- Each bridge must be of uniform size
- The cuts must be rectangular in shape and have a width of $< 0.1\text{mm}$.
- The 'long' perforation may extend into the 'short' side perforations. If this occurs, it must be securely sealed i.e. the strips totally sealed along their length.
- The edge between the tear strip and the edge of the letter must be securely sealed along its entire length
- Sealing adhesive to be < 80 microns thick
- The glue must not run outside the mail item or produce protruding mounds
- Glue to be fully cured before the mail is presented to Royal Mail
- Tensile strength of the glue must be $> 4.5\text{N}$ and fibre tear must be exhibited upon separation

Figure 75: Pressure seal envelopes



12 Single sheet mailer

Please contact your Access Account Manager to discuss the design and construction requirements for mailers created from a single sheet of paper.



Postcom
Rockfield Business Park
Old Station Drive
Cheltenham
GL53 0DL

01242 787 799
info@postcomgroup.com