All You Need to Know About Signs and Labels !

Manufacturing Processes
Sign & Label Information
Material Types
Product Examples
How to order

Please re-distribute
to other interested parties

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signs all you need to know 2009.pdf

Established 1952

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ISO 9001 Registered

Sign & Label Manufacturing Processes

The first stage of production involves creating the sign or label on a computer screen. Anyone with that facility can create an image of their required signs and dispatch it to the sign maker. Preferred file types are .eps, .cdr, .dxf, .dwg and .ai. Since they are what are called vector images and can be scaled without loss of definition. In other words they can be used at any size successfully. Other file types are .doc, .wmf, .tif, .jpg, .xls, .ppp and pdf. These are normally files that are called bitmap images and do not scale without loss of definition. See example on right. However we can still take hand drawn and hand written information or information over the phone. If required we can provide proof images of the requirements before production.

low res bitmap

Some processes lend themselves to 1 off signs and labels whilst others are best used for mass production. We do, wherever possible, reach agreement on standard prices so that purchasing is easier and quicker. The production processes listed below are those most used in the industry and not in any order of preference. All work is quoted for competitively.

ENGRAVING

Involves the computerised machining, into the material, to create letters words and images at suitable depth for reading. Normally the material is multi layered and engraving reveals the colour underneath the surface. We engrave on plastics and metals including stainless steel using a range of letter styles. CNC Machining capabilities range from 10mm square up to 2m x 1m in one piece. Intricate detail can be produced. Lettering as small as 2mm can be produced. Suited to 1 off and multiples.

VINYL LETTERING

Involves the computerised cutting of individual pre spaced letters and designs from thin self adhesive coloured PVC film. The waste film is removed from around the letters then a transfer mask is applied. The mask, holding the letters, is then applied to the blank material substrate. After applying pressure the transfer mask is removed to reveal the sign. Multiple colours can be applied. Letter heights from 10 mm to 1000 mm can be produced.1000's of letter styles available. Graphics and custom safety signs can be made to order. Sign size governed by maximum material size though panels can be added. Normal maximum single size 2000 mm x 3000 mm. Suited to 1 off's and multiples.

SILK SCREEN PRINTING

Involves the creation of a mask set on a fine screen mesh tensioned like a drum. The mesh is placed on top of the material to take the print then liquid ink is spread over and through the mesh with a "squeegee" transferring the ink on to the material underneath. After drying other colours can be applied. This is a relatively quick process once the screens have been prepared. Any colour can be matched. Any letter style. Best suited to long runs of 20 or more..

DIGITAL SIGN PRINTING

This modern method converts a digital image directly to print full colour directly onto the substrate. This can be self adhesive vinyl or solid materials The process is completed by a number of passes over the material. All letter styles, colours and full colour "photo style" Shaded graphics are possible. This process has the advantage of "one pass" full colour printing. Durable indoors, 3 - 5 years outdoors. Suitable for 1 off's and multiples.

DIGITAL LABEL PRINTING

Self adhesive vinyl labels can be printed and cut to size ready for application avoiding the use of hand held machines. This process also allows full colour printing with any language and graphic applied to the reverse of clear plastic to form a durable label. Suitable for 1 offs and multiples.

THERMAL PRINTING

Either a table top or hand held machine that prints labels or small signs. Dry ink is fused onto self adhesive vinyl to form letters and graphics. Can be operated in an office environment. Suitable for in-house manufacturing. Suitable for 1 offs and multiples.

ETCHING

This method uses the same principles as silk screening except the lettering is the only area not printed onto the metal. The printed area is actually a "resist" so that when acid is applied to the metal it eats into the metal forming the letter shapes that are later filled with paint. Useful where normal engraving would be more expensive. This method is suited to multiple labels and panels in metal.

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Sign & Label Information

Signs and labels communicate important information visually to the reader. Primarily they provide instructions designed for the safety of the user and may include graphics as well as text. Such uses range from identifying a switch to spelling out safety requirements, procedures etc. Alternative languages can be supplied..

SAFETY SIGNS

Safety signs are used to instruct, inform, advise or enforce where necessary to establish & maintain safe conditions. Various regulations have established the format of safety signs.
Symbols are the most important part of the sign and should be as descriptive as possible.
They must be large enough to be clearly visible in operation.
Most safety signs are available ready made, although specials can be made to order.
These signs can be made from metals, PVC or more durable plastics and luminous materials.
For more information on materials see the next page.

Hazard Signs are based on a yellow background with black letters and triangular symbols, to advise of potential risks nearby that could result in injury or death if ignored.

Mandatory Signs are based on a blue background with white letters and circular symbols. The instructions must be followed. Not following the instructions could result in injury or death.

Safe Condition signs are based on a green background with white letters and a running man symbol. The sign indicates the safest evacuation routes in the case of a fire or other serious incident.

Prohibition Signs are based on a red background with white letters and circular red outline symbol with black graphic. The instructions prohibit certain actions which are considered dangerous.

Fire Equipment Signs are based on a red background (and white border) with white text and symbol.
They mark the position of fire fighting equipment and alarm systems as well as providing information on the use of the equipment.

Multi-Purpose Signs allow the combining of two or more safety signs on one sign blank.

GENERAL SIGNS AND LABELS

For all other purposes information can be provided to suit the situation. Generally this will be text only but full graphics or mimics can be included in certain situations.
Holes and slots can be added to form a control panel.
There are no reasonable limits to the size.

General Signs can be made from various plastics and metals including stainless steel.
Your ideas or drawings can be converted to artwork for your approval.
The full range of manufacturing methods is available to allow for individual items and quantities.

Labels can be made from various plastics and metals including stainless steel. Normally you will provide the size, colour, text and fixing method for manufacturing.

FINISHING

All signs and labels can be provided with holes or self adhesive tape for fixing. If specific hole sizes and positions are required then these must be detailed. Channelling can be supplied for post fixing.
A UV / anti graffiti film can be applied to most products.

FIXING - general notes

Always check the surface you are putting the sign onto. Dusty, hot or un-eaven surfaces are not suited to self adhesive tape fixing. Check for any services such as electricity before screw fixing.
"Fix all" silicone adhesive can be used successfully for certain applications.
·Allow for the fact that signs will expand and contract as temperature changes.

A GUIDE TO SAFETY SIGN VIEWING DISTANCES

100 mm high graphics should be readable at 17 metres distance.
110 mm high graphics should be readable at 19 metres distance.
120 mm high graphics should be readable at 20 metres distance.
130 mm high graphics should be readable at 22 metres distance.

An H.S.E. guide to The Safety Signs & Signals regulations is available to download free at:
http://www.hse.gov.uk/pubns/priced/l64.pdf

PWG SIGNS

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Sign Material Types

Your choice of material will depend on the intended use. You should consider if the item will be exposed to adverse weather conditions, how strong it needs to be, its thickness and colour as well as its aesthetic requirements and its conditions of use. We can make any size of sign or label but bear in mind that there are many standard sizes which help to keep the cost down. Fixing can be by adhesive tape, screws, tie wraps or glue etc. Though all of these materials are suitable for outside use environmental conditions will affect the length of their life .

Self Adhesive Vinyl is a thin dense coloured film with a strong adhesive backing. Can be used inside our outside. Good colour range. Can be screen printed or used to cut precision lettering that can be applied to other materials. Generally used to produce medium term signs applied to a good surface. Suitable for up to 10 years according to quality of material materials used.

Fluted PVC is lightweight and is suited for temporary signs. Normally white but can be overlayed with vinyl or silk screened to another colour. It is then printed or can have vinyl letters applied. Normally 3mm thick. It can be nailed. Maximum life of one year.

Foam PVC is a medium density durable sheet. A basic range of colours can be overlayed with vinyl or silk screened with another colour. Normally 3 or 5mm thick. can be face screen printed or vinyl lettering can be applied. Suitable for up to eight years according to conditions.

Rigid PVC is a solid sheet A basic range of colours can be overlayed with vinyl or silk screened to another colour. Signs can be printed or vinyl lettering can be applied.
Normally 1.5 mm or 3 mm thick. Suitable for up to ten years according to conditions.

Acrylic sheet is very durable and much stronger than glass with a good range of basic colours.
Clear sheet can have text and images applied to the back to create a wider colour range.
Can be silk screened, engraved or have vinyl lettering applied.
Normally 3 to 5 mm thick. Suitable for up to ten years according to conditions.

Polycarbonate Sheet is almost unbreakable and the clear sheet can have text and images reverse applied to create a wide colour range. It can be silk screened or have vinyl lettering applied Normally 3 to 5 mm thick. Suitable for up to twelve years according to conditions.

Engraving Sheet is made from plastic and paper laminated with phenolic. The top surface is engraved through to reveal a contrasting colour underneath. Basic colours only.
Vinyl letters can be applied. 1.5 mm and 3 mm thick.
Best suited to text engraving and control panels.
Suitable for up to twelve years according to conditions.

Photo luminescent sheet lights up in sudden darkness for a number of hours.
Makes emergency evacuation easier. Vinyl text and images can be applied or silk screened.
Normally 1 mm thick. Available in clear for reverse printing.
Suitable for up to ten years according to conditions.

Aluminium composite sheet has the appearance of aluminium without the cost.
Normally 3 mm thick and white or natural coloured.
Vinyl lettering can be applied or silk screening.
Suitable for up to ten years according to conditions.

Anodised aluminium sheet is very strong and durable. Normally 1.5 mm or 3 mm thick and self coloured. Can be engraved, vinyl lettered or silk screened.
Expected life up to fifteen years. Adversely affected by salt water.

Fibre Glass Sheet has the maximum strength of a general plastic. Signs can be bonded into the material which is virtually unbreakable and resistant to fading and water.
Highly resistant to vandalism. Normally 3 to 5 mm thick.
Suitable for up to twenty years according to conditions.

Brass Sheet is used for prestigious signs and labels and can be engraved or etched .
Lettering and graphics can be filled to any colour.
Normally 1.5 mm to 3 mm thickness. Tarnishes easily but will last a lifetime.

Stainless Steel is the most durable material for labelling and control panels. can be engraved or etched . Lettering and graphics can be filled to any colour.
Normally 1.5 mm to 3 mm thickness.
Well suited to offshore use..will last indefinitely.

Tritium Gas self illuminated signs require no maintenance. Suitable for emergency signs.
Sealed in a frame. Controlled disposal / replacement required.
Suitable for up to 20 / 25 years according to conditions.

We have based our estimates of material life on our own experience and other information as it is made available.
No warranty exists on materials since the conditions of their use are out ouf our control.

We CNC machining and fabricate in these materials as well as making signs and are always pleased to receive enquiries of this nature.

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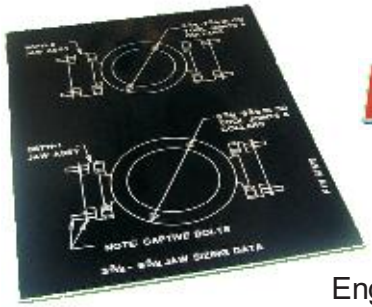
Typical Signs, Labels and manufactured products

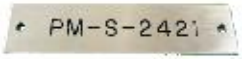


Engraved labels

lockout equipment

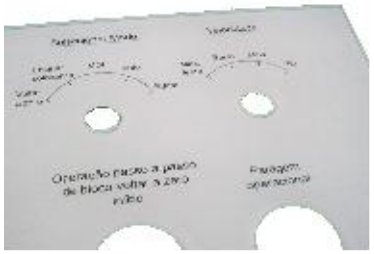
printed labels

Safety signs



Warning tapes

Custom made proucts



Control panels

Barrier signs

temporary marking

Permit to work holders

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How to order

If you are ordering against a code we will use that specification.
Otherwise we do need the information below if you have it.

CHECKLIST
1/ You need to choose a material, a size and a thickness.

2/ Choose colours for the material and the wording.

3/ A letter height should be specified and a letter style if required.
Or you can leave it to us. We will make the choices for you.

4/ The method of fixing should be specified.

5/ List the total quantity and how many of each.

6/ The most important thing is that you must supply the wording that is required.

7/ Delivery by carrier or post is normally extra.

If you have any problems just ring or email us and we will sort it out for you.
proofs are normally only supplied when an order is placed. this can be sent by email or post.

Catalogue supplies are priced from list price with a discount for quantity.
Many of our in house manufactured signs and labels have fixed prices.
Custom made items are priced individually.

When you have your requirements decided contact us and we will quote you.
Delivery is normally just a few days but complicated orders may take longer.
We recommend communication by email.

PWG are one of the few sign companies who operate an approved Quality System.
Your order will be processed quickly and any queries dealt with.

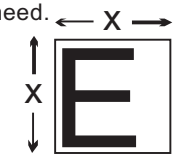
Typical order / enquiry lines;

4 @ 35mm x 60mm x 1.5mm thick white phenolic. black letters. 2 holes 3mm
wording as below.

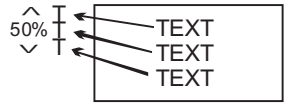
6 @ code ref b2341. self adhesive.

2 @ 600mm x 450 mm x 3 mm foam board with warning symbol. Text “Danger Machine may start without warning”
(we will use the standard hazard symbol and yellow and black for hazard signs).

SIZE CALCULATION METHOD
You may need to work out if the wording you require will fit the size you need.
Lettering has a standard width but can be squeezed or stretched.
Plain text is used unless specified.
As a general guide the letter width (including space)
occupies the same area as the letter height.
15 letters at 10mm high would need a label approximately 150mm wide.



Generally the text heights combined should not exceed 50% of the label height.
So 3 lines of text at 10mm high would need a label 60mm high.
When preparing your order / enquiry it is best to keep these things in mind.
For non critical items you may choose to leave PWG to select a letter height that is a best fit.



This is the first edition and we hope you found the information that you require.
We shall update the information as necessary.

Should you have any queries we are always on hand and our advice is given freely.
Though we are geared to the industrial market we welcome all enquiries from whatever source.

We supply from a wide range of catalogues.
These are available in print or to view on our web site.
www.pwgsigns.com

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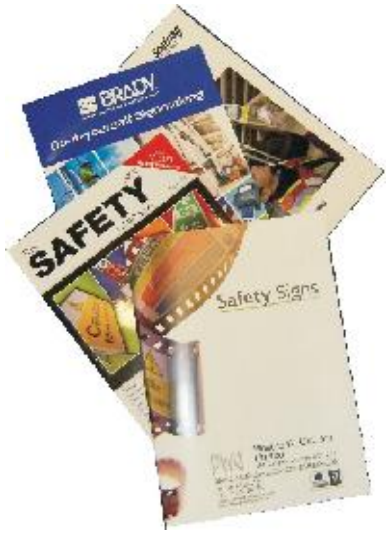

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