



ColloTYPE Labels

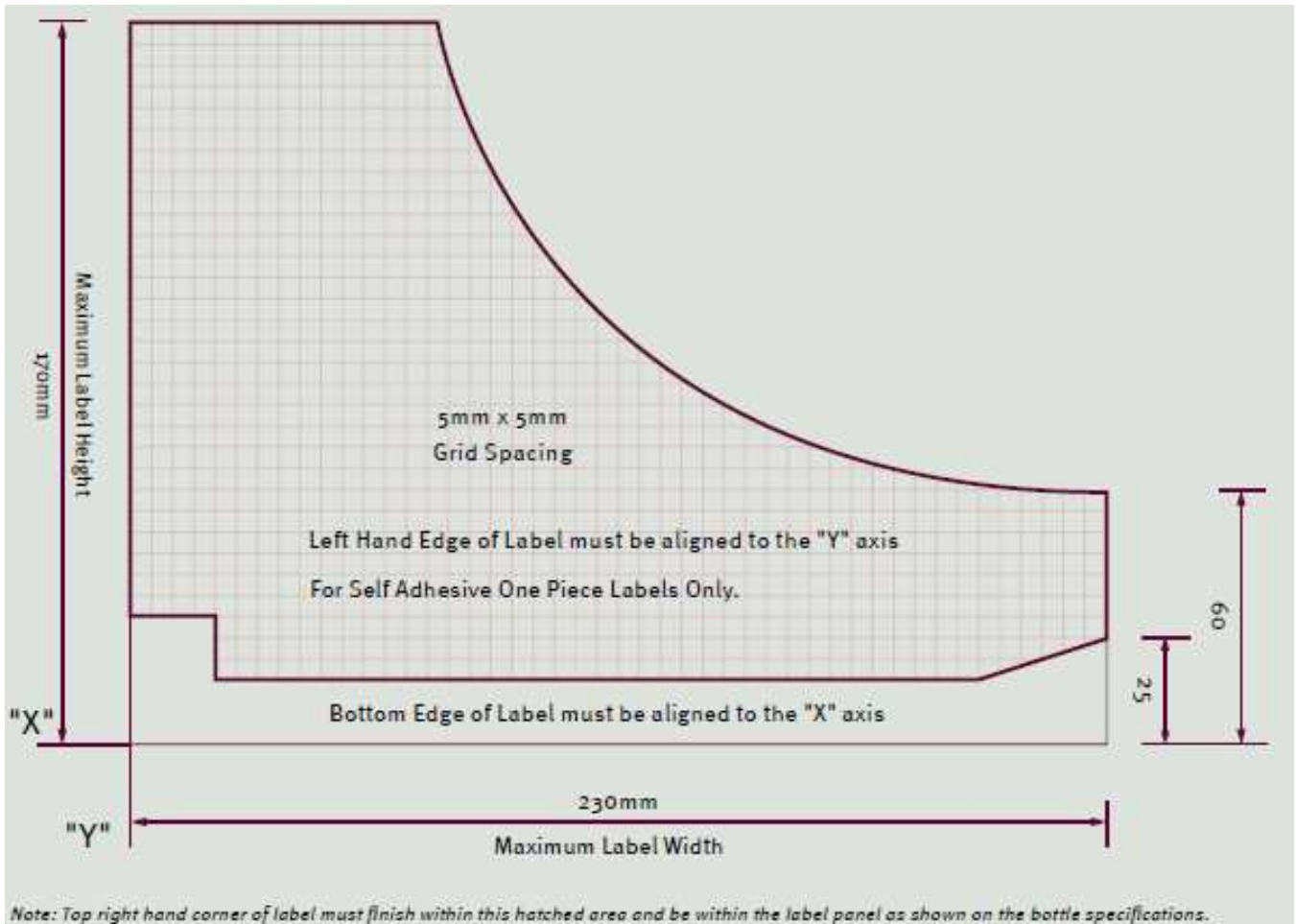
“WORLD’S BEST PREMIUM LABEL SOLUTIONS”

Label Application & General Label Information

ColloTYPE Labels

LABELING MACHINE APPLICATION CAPABILITIES

- Every label applicator is different. The following are general guidelines, and any variance to the below must be qualified and approved by the packaging provider.
- Label height specification to be 20mm from base of bottle and at least 3mm inside top and bottom of label panel.
- When specification of label panel height is known, select label size from the "Label Size Graph" (Provided by Vinpac International) This graph illustrates the recommended height to width ratio of a label to achieve the optimum processibility during application.



Factors that influence adhesion

In principle, adhesion can be described as the ability of the adhesive to wet out and then bond to the applied surface. After labelling, pressure sensitive adhesives start to flow and build up contact with the application surface.

The following paragraphs explain how the surface of a container and the labelling, storage and service conditions influence adhesion.

- 1. Dimples/sink and bulge on container surface** – A container surface roughness or smoothness affects the contact area of the adhesive. If the container surface is very rough/inconsistent, contact can take place only on top of the 'hills', the 'valleys' will not be in contact with the adhesive. The total contact area will be small and the resultant adhesion low. Accordingly, a permanent adhesive for rough/inconsistent surfaces must properly wet out the 'valleys'. Thus securing greater than 50% bond to the surface. This can be achieved by raw material selection. Application testing is strongly recommended for these rough/inconsistent surface containers.
- 2. Container Shape** – The shape of labelled goods can sometimes place limitations on the choice of adhesive. Necks of Wine and Spirit bottles, where the surface is convex and the radius tight –are the most common difficult profiles. Corners on boxes are another example. On a tight, convex radius, the face material will try to return to its original flat shape. An adhesive with high internal strength (cohesion) is required to keep the label adhered and to avoid edge-lift. The flexibility of the face material is also an important factor. Very rigid face papers or films are not suitable for tight, convex radius.

3. Application Temperature

The properties of adhesives are affected by temperature. With various modifications, some adjustment can be made to an adhesive's application temperature range at low temperatures, adhesives become harder. This decreases adhesion – particularly immediate adhesion. In higher temperatures, adhesives soften. This is the result of decreased internal strength. Softening may increase adhesion to a certain extent because it helps the adhesive to flow and the contact area with the substrate increases. However, if an adhesive gets very soft it begins to lose its adhesive properties. Also, an adhesive has a greater tendency to bleed as it softens.

Bottle temperature should ideally be above 15°C, with room RH below 55%, when labels are applied.

SHIPPING BOTTLE SAMPLES

Please be aware loose fitting polystyrene wine shippers such as those provided by DHL, Australia Post & UPS etc. will cause label damage during transport if the bottle is not protectively wrapped and locked into the position so that movement cannot occur.

Bottles should be completely dry before they are wrapped into position.

Please find photographs below of the type of label damage you can expect.



ENVIRONMENTAL CONDITIONS

In part, adhesive selection should be guided by the conditions expected during label application:

1. Will the air and/or bottle temperature be below 5° C?
2. Will there be a layer of water/ moisture on the bottles surface?

Labelling wet bottles is a challenge. Water acts as a contaminant, compromising the integrity of the adhesive. When applying pressure-sensitive labels to wet bottles, the following tips may assist in overcoming the issue:

1. Control air temperature, humidity and fill temperature to prevent condensation on filled bottles. Use the Dew Point Chart (below) to balance temperature values at the labeller with relative humidity.
2. Blow water off the bottle surface by installing air knife just before the labeller head. Let gravity work for you; blow the water down the bottle to expose dry glass.
3. Apply the pressure sensitive label to the dry glass after water/condensation has been blown off.

The numbers on the Dew Point Chart indicate the lowest temperature at which wine can be filled before condensation forms on the bottle.

	Ambient Temperature °C						
RH%	10	15	20	25	30	35	40
10							3
15					1	5	9
20				1	5	9	13
25				4	8	13	17
30			2	7	11	16	19
35			4	9	13	18	22
40		2	7	11	16	20	24
45		4	8	13	17	22	27
50	1	5	10	14	19	24	28
55	2	7	11	16	21	25	30
60	3	8	13	17	22	27	32
65	4	9	14	18	23	28	33
70	6	10	15	20	24	29	34
75	6	11	16	21	26	31	36
80	7	12	17	22	27	32	37
85	8	13	18	23	28	33	38
90	9	14	19	24	29	34	38
95	9	14	19	24	29	34	39
100	11	16	21	25	31	36	40

Here's how to use this guide:

1. Verify relative temperature and humidity at the labeller.
2. Find the corresponding dew point on the chart.

ENVIRONMENTAL CONDITIONS

3. Keep the fill temperature of the wine above this value prevent condensation interfering with your pressure-sensitive labelling operation or determine the required adjustment to the relative humidity or temperature to effectively compensate.

GOOD LABELLING PRACTICES

Introduction: In order to optimise productivity of the self-adhesive (pressure sensitive) labelling operation, the following practices must be adhered to at all times.

Handling and Storage

1. Scoring of or moisture on the edges of label reels must be avoided as nicks to or weakness of the backing paper edges will cause web breakages on the production line. On receipt handle the reel with care. Do not drop.
 - a. Place the packets and/or reels onto pallets or shelves. These pallets or shelves to have solid wood surfaces or to be covered with smooth cardboard.
 - b. Do not cut the outer plastic wrapping with a sharp object. This can damage the edges of the backing paper.
 - c. Pick up reels of labels by hand, not by using a hard or sharp object e.g. screw driver, fork lift truck, etc. Sharp objects can cause damage to the edges of the backing paper.
2. Self-adhesive labels should be stored at between 15° and 25°C at 55% RH, away from direct sunlight and in their original packing and not on the floor.
3. Always store reels of labels on the flat sides of the roll. Storing on the circumference can put pressure on the label face and could elongate the inner core.
4. Label reels issued to production must be stored on smooth surfaces as in (1) above.
5. Have a rodent and pest control policy in place. The edges of labels can be chewed by rats etc.
6. Shelf life of labels is normally 12 months from receipt, when stored in correct conditions.
7. Do not store reels of labels higher than 500mm and place thin cardboard between reels.
8. Ensure a practice of FIRST IN – FIRST OUT so labels are not stored beyond their shelf life.

Production

To ensure trouble free labelling, the following factors are important:

1. Presentation of bottles to the labelling beak must be consistent. If bottles are not presented in the same plane every time, inconsistency of label positioning will result.
2. The bottle surface to be labelled must not be contaminated with moisture, condensation, dust silicon release agent, varnish, grease etc. The presence of any of these elements will result in the adhesive not being able to adhere to a stable surface. Bottle temperature should ideally be above 15°C, with room RH below 55%, when labels are applied.

3. The surface to be labelled must be smooth (i.e. free of ridges). Ridges, stipples, and imperfections will prevent 100% of the adhesive being in contact with the surface and could result in label lift.
4. The labelling head must be mounted in such a way as to avoid vibration. Vibration will result in inconsistent label positioning.
5. The label reel must be firmly wound; having tension applied at all times to enable ease of dispensing of the label. A slack web will result in the labels following the web around the beak and not releasing from the backing.
6. Product and label microswitches and/or sensors must be clean and free of paper dust and lint.
7. The leading edge of dispensing beak must be 1mm in diameter, smooth (no nicks) and clean.
8. Guide rollers and dispensing beaks must be kept clean of paper dust, adhesive and other foreign matter which could 'snag' the edges of the backing paper.
9. Sufficient pressure must be applied when wiping down the labels to the bottle to maximise adhesive flow.
10. Adhesion of the label to the container surface increases from application to 24 hours after application when ultimate adhesion takes place. Depending upon the label material, adhesive type and container surface, the label may be removable shortly after application.
11. All papers are not created equal. Machine adjustments and set-up techniques will be required when changing between paper types.
12. It is very important to note all machine adjustments for each particular paper type / set-up so that it can be duplicated at a later date.

STANDARD INDUSTRY UNWIND ROLL CHART

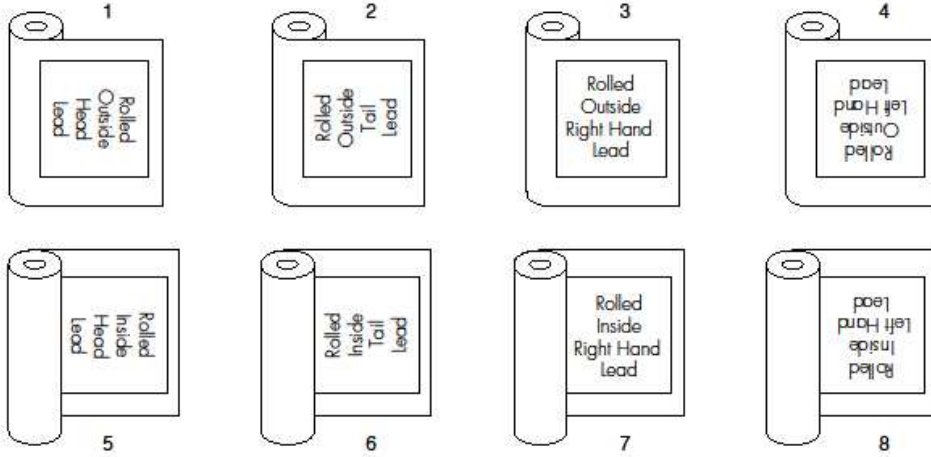


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Standard Unwind Roll Chart

Please indicate, by figure number, desired unwind direction



Further information required:

Core Size: 76.9mm - Number of Labels per Roll or Diameter of Roll

Type of Application: Hand, Semi-Automatic, Fully Automatic