

Calendered Vinyls

One of the most flexible jobbing shop operations in the area of calendered vinyls is that of Monsanto Canada Ltd. The company produces unsupported sheet and film; coated fabrics; expanded fabrics; laminations of many types both heat or adhesive bonded; embossed solid colors, or an almost infinite range of printed colors combined with embossing.

Furthermore, the company has a highly developed resin and lacquer technology, which, in combination with laboratory, testing, and pilot plant facilities, keep it in the forefront of this comparatively short run, highly competitive industry.

When its new high intensity mixer is brought onto line in the near future, Monsanto will have achieved an almost complete re-vamping of its production facilities. The new mixer, used to combine pigments and plasticizer prior to mixing with resins in the Banbury, gives 95 percent mixing efficiency, at a considerably faster output than the former system employed.

A weighed batch system has been retained for this operation, bagged batches of pigment and plasticizer being fed into the Banbury from a horizontal conveyor automatically on demand. Bagged resin is fed into the Banbury manually. Control of heat in additional plasticizer, as well as feeding the amount required into each batch, batch temperature, feeding of batch to holding mixer, mixing time, etc., are all controlled automatically from a central panel.

Two inverted "L" calenders from Canada Machinery Corp. Ltd., Galt, Ont., are on stream, both capable of producing coated fabrics in up to 66 in. widths directly on the calenders — an operation unique in Canada. Between the two machines, gauges ranging from

2½ to 30 mils can be produced.

Vinyl stock can be combined with either a woven or knit fabric, depending on end use; or the fabric can be coated to produce an expanded product, an operation which requires two passes through the calender: one to apply the blow coat and the other the protective finish coat.

This operation can be fairly critical since the blow coat must be applied in a narrow temperature range which will permit calendering to be carried out, yet will prevent it from expanding until required to do so.

The blowing operation is performed in a "Jet Zone" from Barrel and the only one of its kind in operation here. In addition to producing a small-celled uniform foam, this equipment also does an embossing operation.

Another addition is the 90-ft. laminator/embosser from Lembo Corp. of Canada Ltd., Midland, Ont. This machine has a double drum laminator — the only one now in Canada — capable of producing composites having up to four webs using either heat or adhesive bonding. This operation can be followed up with embossing and valley printing on the same machinery.

Lembo has also supplied a two-headed and a six-head printing/finishing machine.

The two-head machine is used to apply a color and a finish coat where registry is not required. Its most extensive use is for applying toning to a solid color in order to produce an exact match for any sample, then apply finish lacquer as a protective wear coat and to give the desired "hand".

Pearlized coats can be applied with this equipment, and it is also used for "Spanishing" — using rubber rolls to squeeze color from

high spots in the stock's texture into low areas to achieve a two-tone effect. A rich, highly textured two-color effect can be achieved by using a color which differs from that of the stock.

The six-head machine is able to print up to five colors in perfect register and apply a finish coat in one operation.

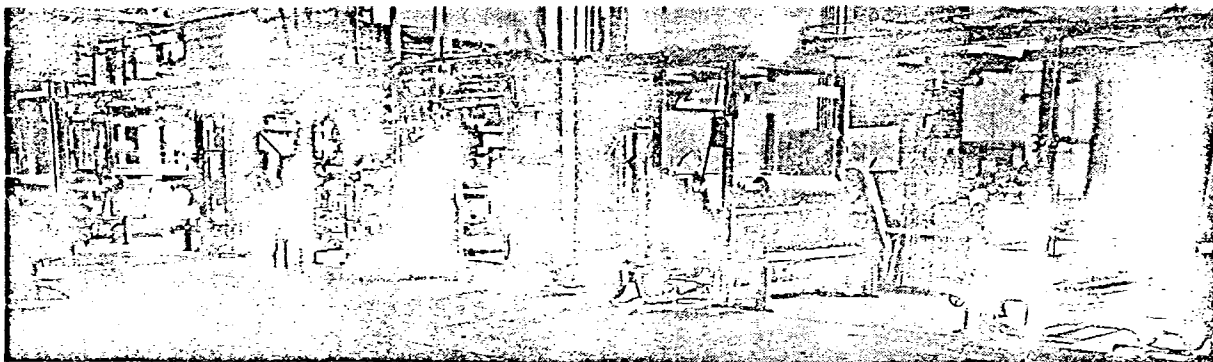
One of the largest markets for Monsanto's coated fabrics is the automotive field for which it produces head liners, upholstery and trim fabrics. Other transportation applications include farm vehicles and mobile homes. In the latter instance, wall panelling consisting of chipboard sandwiched between two vinyl skins is the fastest growing application.

Use of wall coverings and upholstery fabrics for home and commercial applications are growing steadily, as are decorative finishes for furniture. Manufacturers of handbags, footwear, luggage, outerwear, window shades, table cloths, baby carriages, baby pants, golf bags, book bindings and the novelty trade are a few of the other users for this range of materials.

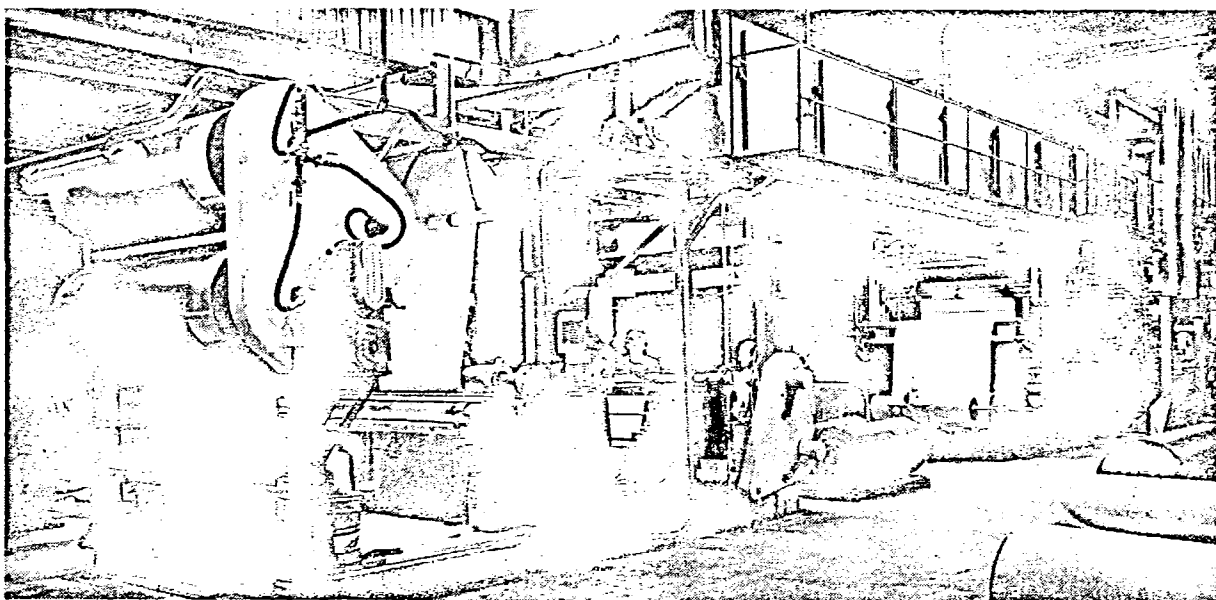
Nylon scrim is heat sealed to vinyl for lawn furniture and is also used in the making of tarps.

An unusual footwear application is the laminating of a metallic foil/translucent-colored vinyl composite to second grade leathers for production of high style patent leather shoes.

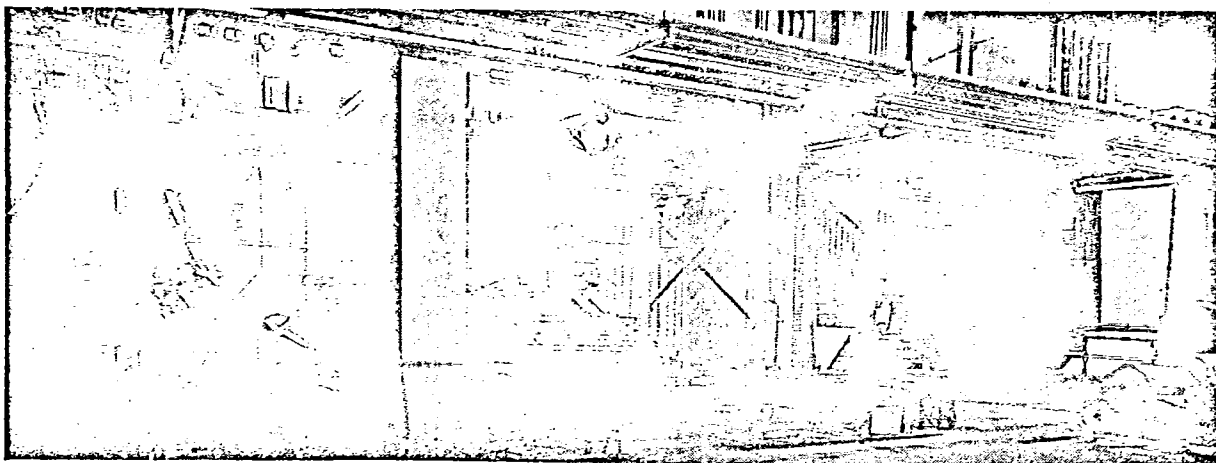
A new development from Monsanto is Cerex, a light, spun bonded nylon material designed for applications where extra strength and dimensional stability is required. The backing is available in weights ranging from ½ to 2 oz./sq. yd. Also new is an ABS/vinyl laminate currently used by one manufacturer as a vacuum formed snowmobile shroud.



Monsanto's embosser/laminator can handle up to four web laminations, plus embossing and valley printing.



Monsanto's new two-head Lembo printing/embossing machine used for color-tone finishing, embossing and Spanishing.



Six-headed printer/finisher enables Monsanto to print up to five colors in register plus apply finish coat.