**Market Trend**

Producers of disposable hygiene articles continue to pursue opportunities to improve/enhance product quality and reduce costs in order to gain a competitive edge and maximize profitability. The ability to apply two different adhesive add-on weights to elastic strands from a single dispense applicator accomplishes both of these objectives.

Improving the comfort and fit of disposable hygiene articles is a ongoing challenge for manufacturers. Applying a lower add-on in the center section of the elastic strand enhances the elastic retraction force allowing the elastic to be more pliable to move with the wearer; there is less likelihood of cutting or binding of the elastic. The heavier add-on weight at the ends provides a stable, secure bond so the disposable hygiene articles remain in place on the wearer.

**Application Description**

Elastic strands are used to improve the fit of disposable hygiene products and are typically found around the leg and waist areas of the article. Elastic strands need to have strong bonds at both ends but only a stabilizing bond to keep the elastic in position in the center section. Maintaining as much elasticity in the center section of the strand as possible without the elastic strand moving can help improve the comfort as well as the product performance as the garments ability to “move” with the wearer provides both comfort and a reliable seal to retain fluids.
Benefits of the Application to Consumer/End User

- Potential cost reduction by using less adhesive
- Improved performance of disposable hygiene products with strong bonds on the ends but enhanced elastic retraction from lower add-on weights in the elastic strand center
- Supports product differentiation and flexible manufacturing

Why Use Nordson Equipment?

- Nordson’s experience and proven expertise in material delivery and high-speed dispensing as reflected in a large, global installed base of applications on baby diaper, adult inco and femcare machines.
- Flexible system layouts adapt to current production layouts and can accommodate future requirements.

Typical Application

Typical elastic attachment is accomplished using either Nordson Allegro® or SureWrap® nozzles. Nordson recommends using the new Duet™ variable dispense applicator. The Duet applicator’s two Speed-Coat® modules cycle independently to feed a single nozzle delivering two different add-on weights. This dual dispense technology delivers heavier add-on for high bond strength at the ends of the elastic strand and lighter add-on in the center to provide a stabilizing bond.

Nordson Equipment

Melter

VersaBlue® Plus or AltaBlue™ Touch melter
- Holding and pumping capacity sized for application
- Standard PR-series pump
- Standard filter screen
- Remaining configuration depending on customer requirement

Heated Hose

Elastic adhesives are compatible with standard Nordson hoses with a diameter of 8 mm.

Applicator and Nozzle

The Duet variable dispense applicator equipped with either Allegro or SureWrap nozzles depending on customer requirements such as production speed.

Additional Equipment

Two independent adhesive streams supply each Duet applicator so splitting or dividing a single adhesive stream from melters is the most efficient and cost-effective means of supplying adhesive to each Duet applicator. TruFlow dividers are recommended to feed the Duet applicators.
One typical system configuration is:

Recommended Action
This document has been prepared to alert the field to an opportunity and to facilitate quoting of a Nordson solution. For system quotations or if you have additional questions about elastic attachment with variable dispense applicators for disposable hygiene products, please contact your local sales representative.

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