

## Ask the Technical Experts!

*One of the benefits of membership is the technical expertise provided by Printing Industries of America. Our technical experts from the Center for Technology and Research discuss common production problems and issues. The Center for Technology and Research helps members with environmental, health, and safety concerns; consulting and on-site technical assistance; Technical Association of the Graphic Arts; and technology training.*

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Q. How do you make a decision to use dye-based inks versus pigment-based inks?

A. You have to look at the specific application when making this choice. Dye-based inks tend to be slightly less expensive and have a wider color gamut when compared to pigment-based inks. They also can smear if a drop of water contacts the printed page, as dye-based inks are water-soluble. Pigment-based inks tend to bond to the substrates better than dye-based inks and are the best choice when durability, fade resistance, black density, and saturated color are important. With some substrate types, pigment ink can have a tendency to sit on top of the paper after it has been printed. Depending on the coverage and color build, you could feel a raised surface on the finished product.

Q. We are a small printer and occasionally use a small walk behind electric fork truck. Do I need to provide formal training for the operators?

A. Yes. Walk behind electric fork trucks, powered hand trucks, pallet jacks, and rider trucks are considered to be powered industrial trucks (PIT) under OSHA regulation. OSHA regulation requires that employers train PIT operators before they begin operating PIT and retrain the operators at least every three years. The training classes must include classroom knowledge-based instruction and hands-on evaluation to ensure the operator demonstrates competency. It is also important that training is representative of the equipment, attachments, and operating conditions at the facility. Anyone who has not been through this training or recertified within three years should not operate a PIT.

Q. A customer has a marketing contest flyer to name a baby lion and the designer wants the drawing of the baby lion to have raised soft fur, like a Santa beard on a Christmas card. How can this be done?

A. You can apply a glue pattern and add loose colored fabric fibers that adhere to the glue pattern. The loose excess fibers are removed by vacuuming. The process is called flocking and

there is specialty equipment for flocking. This is not common and is used mainly for greeting cards and children's books. You will need to outsource the flocking. For more information take a look at American Flock Association: [www.flocking.org](http://www.flocking.org).

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**Printing Industries Resources:**

Offering unbiased and confidential results, Printing Industries of America provides a range of testing and laboratory services to help solve printing-related problems. For more information, please contact Jim Workman at 800-910-4283, ext. 710 (direct 412-259-1710), visit [www.printing.org/labservices](http://www.printing.org/labservices) or email [labservices@printing.org](mailto:labservices@printing.org) or [jworkman@printing.org](mailto:jworkman@printing.org).

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