



INTRODUCTION TO PROCUREMENT CONSIDERATIONS FOR HEALTHY INKS

Consultation Version

Health Printing Initiative
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THE ROLE OF INKS IN HEALTHY PRINTING

Printed paper plays a defining role in our society. Printing was an educational tool for the industrial revolution, and today digital printing is driving ‘Industry 4.0’. Printing ink is in our packaging, publications, photographs, homes and offices. The ink is a small part of printed products by weight, but has big impacts on recyclability, as well as workers & environmental health. Today, some inks could be classified as healthy, while others have a way to go. Customers have the power to promote the use of healthy inks through purchasing. However, most procurement guidelines for printed products focus on paper rather than inks. These guidelines fill that gap. A more detailed description of healthy printing is in the Healthy Printing Charter, at www.healthyprinting.eu. Reading the Charter is one place to start with procurement.

WHY DO IT? CLEANER WITH FEWER RISKS

Regulations on landfilling and incineration are becoming stricter and more expensive, as is disposal of non-biocompatible printing products. Wastewater and sludge from paper recycling are also expensive to treat. Safer residues and recycling sludge prevent water pollution and save treatment costs. Cleaner sludge could be used as a resource – see separate paper on reuse of paper sludge.

RESOURCE FOR THE NEXT CYCLE

Paper fibres can be re-used several times in a “cascade” before being returned to the environment as resources or combustion byproducts. New products from used fibre are coming to markets, e.g. www.refibre.eu. Safer printing makes the fibre cascade more economical by reducing sludge disposal costs, and improving fibre quality by reducing contaminants. Healthy ingredients transform recycling sludge into a resource to be used in other processes or burned safely.

PURCHASING GUIDELINES TO IMPROVE QUALITY & VALUE

The following guidelines apply primarily to inks for printed paper and paperboard products, and are qualitative only. Actual metrics will vary according to the types of inks, printing processes, substrates and volumes. Guideline categories covered here include;

- 1.1 Type of printing & state-of-art
- 1.2 Guidelines, certifications & what is being certified
- 1.3 Security of supply
- 1.4 Pricing on a Total Cost of Ownership basis
- 1.5 Recommendations of the printer

1.1 Ask your printer about the type of printing & state-of-art

Sometimes healthy inks are only available for certain print processes. For example at the time of writing these guidelines, offset is more available than rotogravure or flexo, although this is changing rapidly. Digital and UV printing are in transition. In order to benefit from healthy inks, inquire about the state-of-art to support your decision-making. Information sources include the Healthy Printing Initiative website.

Based on this, reconsider the optimal type of printing for your print products. Designers might prefer one type, printers another, and the procurement department another. Sometimes it is good to revisit ‘*we’ve always done it that way*’. For example, do you really need metallic inks for your labels? What are the true considerations for rotogravure vs. offset vs. flexo? Are the quality assumptions accurate?

1.2 Ask about guidelines, certifications & what is being certified

1.21 Establish a baseline. Ask the printer these questions;

- Do the inks meet the Exclusion Policy of the European Printing Inks Association EuPIA <http://www.eupia.org/index.php?id=3> ?
- Do inks score well on the de-inkability ranking of the de-inking association INGEDE <http://www.ingede.de/> ?
- Did the printer and ink manufacturer sign the Healthy Printing Charter?
- Does the ink manufacturer have a roadmap to healthier inks?
- Do the inks have a certification label? See 1.22.

These Yes/No answers will let you establish a baseline for comparison.

1.22 Ask which ‘eco’ labels apply to the inks

For a guide to labels and how they apply to healthy printing, refer to the publication *Comparison Of Printing-Related Labels And Ordinances* at www.healthyprinting.eu. Ask the printer which of these the inks have.

1.23 Ask about scope

How extensive is the scope of the label or certification?

- Which additives are covered?
- Which colour ranges are covered?
- Is the certification for just the inks or the whole printed product?

Optimally, certifications cover all ingredients in the printed product.

1.24 Determine your ambition level when you are considering labels

Certifications are often referred to as 'labels', not to be confused with printed labels! The publication *Comparison Of Printing-Related Labels* available at the Healthy Printing website concludes that a number of labels require elements of healthy printing, but Cradle to Cradle (C2C) certification is one of the only labels with a pathway to continuous improvement. The Cradle to Cradle Product Innovation Institute has different levels of certification and issues different categories of certificates. For example, the Materials Health Certificate is quicker, but only evaluates one of five categories covered in a full C2C certification. If you want to establish a roadmap to healthy printing, consider a stepped process to different types and levels of C2C certification.

1.3 Check on security of supply

Check if the supplier is able to provide the volume and serve the geographical region selected.

1.4 Do your purchasing on a Total Cost of Ownership basis

Inks comprise only a small percentage of the packaging price but affect 100% of the packaging's health, safety and recyclability. As a result, increases in the printing cost generate small increases in the overall packaging cost, but generate a substantial improvement in quality, recyclability and risk management. These result in hidden benefits for stakeholders, including customers purchasing the product.

However, traditional procurement is often only based on Point of Sale (P.O.S.) costs for the procurement department. In the Circular Economy many of the economic benefits and costs accrue across the product cycle. The challenge is to align these so the parties making the investments also reap the benefits. Aligning benefits with stakeholder investments is a main objective for a successful circular economy. To calculate that, a Total Cost of Ownership approach is recommended.

Healthier inks are sometimes but not always more expensive at P.O.S. due to recouping of R&D investment and raw materials costs. However, those costs are often compensated for by total cost of ownership factors.

1.41 TCO includes evaluating the following factors

Ask the printer or the ink supplier:

- Is less ink-per-unit of packaging used as a result of healthy inks?
- Are there savings on time from increasing printing speed?
- Are there savings on energy costs due to quicker printing times?

- Are air quality and skin contact with inks improved in the workplace?
- Is there a potential price improvement by guaranteeing economy of scale to the printer or ink supplier?

Evaluate for your own purposes;

- Is risk management improved e.g., claim on 'mineral-oil' free, or proactive preparation for stricter regulations like the proposed EU regulations?
- Could your organisation as a buyer of the printed product make an added claim e.g., improved recyclability?

By knowing those factors, you will be able to determine which improvements you are supporting when you specify healthy inks for your printed products.

1.42 Is it an innovation initiative or a traditional procurement process?

If you as the customer are introducing healthy printing as a new specification to a printer, it is worth evaluating the priority given to price compared to traditional procurement, at least for the piloting stage. If you as the customer want to drive innovation, consider small price increases as an investment in the overall approach of your organization to healthy processes. As time goes on and volumes increase, the price of healthy inks will decline.

An example of supporting this type of innovation is that customers sometime initiate and pay for certifications of some suppliers' products in order to encourage them to adopt roadmaps toward product optimization.

1.5 Recommendations of the printer or print broker

The printer or broker often has its own suppliers and might prefer to work with them. However, with healthy printing other factors described in these guidelines come into play, so it is good to ask if all those factors are considered in their recommendation.

In some cases, long-term contracts might be in place, which limits your choices. However, it is still possible to ask those contractors to introduce healthy inks.

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