

Printing Products and Ecology - A joint position on ecologically compatible production and recycling of printing products by German associations from the printing industry (VDP, VDZ, BDZV, bvdm and VdD). A general statement, that indicates the principle of approach of all subsidiaries throughout the **hubergroup**.

As in other areas of manufacturing printed products, the ink manufacturers take due account of environmental aspects when selecting the raw materials for their products, in the production of the printing inks and in the treatment of their residues, as well as by means of efficient use of raw materials and saving energy in the entire manufacturing and distributing process. The member companies of the German Printing Ink Industry Association support a so called "Responsible Care" campaign of the German chemicals industry. As a result of this commitment, major progress has already been made and the environmental impact has been noticeably reduced in recent years.

Because they intend to employ additional possibilities for protecting the environment on the basis of new technological and scientific findings, the ink manufacturers and magazine publishers have agreed to draw up and approve additional new goals based on the successes already achieved in the field of environmental protection as well as to define viable new approaches and possible controls.

Selection of Raw Materials for Inks

Printing inks are primarily made from color pigments, various resins and polymers, different solvents and miscellaneous additives. The raw materials are selected according to criteria which are designed not only to meet technical and economic requirements, but above all to ensure that only environmentally compatible and physiologically safe substances and processes are used. The agreement on a "negative list of raw materials for printing inks and associated products", which was concluded as a voluntary commitment by all members of the German Printing Ink Industry Association in 1993, is one example of the ink manufacturers' action in this context.

The list is updated continuously. It was also adopted as a voluntary commitment by all other European associations of printing ink manufacturers in 1996. As a result, the use of such toxic heavy metals as lead, mercury, cadmium, chromium (VI) and compounds of these substances, as well as PCB, CFCs and PCP has long since been discontinued; these substances are not used in printing inks anywhere.

Products based on renewable raw materials have traditionally been used with preference in the production of printing inks. All the ecological consequences - up to and including the question of deinkability - are continuously investigated by the manufacturers. Economics, ecological acceptability, occupational safety and product quality are factors of equal importance.



Production & Handling of Printing Inks

Dispersion, mixing and homogenization are the most important stages in the production of printing inks. It does not involve any chemical reactions, nor the synthesis of new substances. As in the production process, top priority is also attached to protecting the environment when handling and transporting the printing inks using the very best technology and measures. The prime objective in all production areas is to exclude environmental impacts from the outset or to avoid them wherever possible.

Printing Products, Inks & Recycling

In addition to the quality and application properties demanded by the market, the ink manufacturers also take big efforts to ensure the recyclability and reusability of their products already when developing the printing inks. For many years, the printing inks industry has cooperated closely with the paper industry in optimizing the removal of printing inks through deinking.

Publishers, printers and papermakers utilize production materials and auxiliaries, as well as printing methods which will not impair the recycling of recovered paper wherever technically possible and reasonable.

Processing & Deinking of Used Paper

The production of new graphic papers from printed matter is one of the cornerstones of the recycling concept. So that graphic recovered paper can be used for new newsprint and magazine papers, the printing ink must be removed from the recovered paper (i.e. it must be deinked). Modern deinking processes require little energy and use eco-friendly auxiliaries. The residues from the recycling process are also used for other industrial purposes. In ecological terms, the products made by the paper and publishing industry are therefore exemplary. Papermakers, newspaper and magazine publishers, ink manufacturers and printers are called upon to ensure that their products can still be efficiently recycled following major changes in materials and processes.

This document is an excerpt from a position paper of some European associations of paper and ink manufacturers as well as publishers and converters, stating the position towards environmental protection. The hubergroup is part of the association VdD, representing the ink industry of Germany. All subsidiaries of the hubergroup are committed to use the best available technology in order to protect the environment at the best.

Eco-friendly, green or environmentally friendly - Words that are frequently used when it comes to making a commercial product more attractive. We would like to give you our thoughts and understanding about that topic that has already maximum attention in Europe for nearly 20 years. When it comes to sense of responsibility, we know exactly how you feel.

Environmentally friendly - Definition

From Wikipedia, the free encyclopedia



Environmentally friendly, eco-friendly, and nature friendly are synonyms used to refer to goods and services considered to inflict minimal harm on the environment. Because there is no international standard for this concept, the International Organization for Standardization considers such a label too vague to be meaningful.

North America: In the United States, the phrase is commonly used for advertising or on packaging to promote a sale, but no Federal standard is required to display the labels, and thusly the United States Environmental Protection Agency has deemed them useless in determining whether a product is truly "green."

In Canada one label is that of the Environmental Choice Program. Created in 1988, only products approved by the program are allowed to display the label.

Europe: Products located in members of the European Union can use the EU's Eco-label pending the EU's approval. EMAS is another EU label that signifies whether an organization management is green as opposed to the product. Germany also uses the Blue Angel, based on Germany's standards.

To clarify the requirements of the enterprise of how to make an "eco-friendly" printing ink, we have to go into details a little deeper. Which factors do come into

play when looking at the sustainability of a printing ink?

- Raw materials and source
- Energy consumption for manufacturing process
- Waste management in manufacturing
- Logistic factors
- Energy needed for processing as a consumable
- Waste creation factor in the converting process
- Recycleability

If you are perfectly honest, there is most likely one bullet point in this summary you haven't been thinking of. Is that correct? The complexity of this topic is easily to be seen when going over those bullet points. In order to evaluate a product completely, it is necessary to write a diploma about the process of manufacturing raw materials, the ink and the converted product. And still, even after investing all this work and compassion, it will remain very hard to prove the outcome, especially on a regular basis, for every pound of ink.

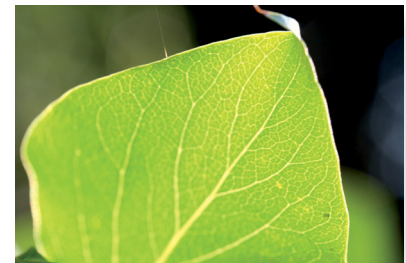
To explain this statement, we would like to give some examples:

Raw materials definitely contribute a lot to the sustainability of an ink. On the other hand we are frequently asked if our inks are made from soy oil. A regrowing resource, no doubt - but what if the soy grows on a former piece of land that was covered with rain forest? That will be hard to determine by the label of the soy ink. At the moment, there is no reliable tool for the consumer to find that out. A backwards integrated manufacturer like the **huber**group has the advantage to know the sources of the own raw materials.

Energy consumption is a vital factor in the carbon balance sheet of a product. By introducing the **INKREDIBLE** printing inks, the **huber**group has taken

the next step into a new era. Lowering energy input is not only a green factor, but also enables us to uncouple parts of the energy cost from the product. With energy getting more and more expensive, this is also a contribution to keep ink pricing on a reasonable level.

Waste management includes washes, waste water, packaging of raw material, ink residues in return totes - and much more. Maybe one of the most complex challenges. Utilizing professionals in that business and establishing smart concepts combined with advanced recycling technology, we have reached a remarkable level in "avoiding waste". Due to the cost of processing waste, also an important factor to stay competitive.



With the newest formulations of our **INKREDIBLE** REVOLUTION heat set offset ink series, we have already proven to be energy saving and waste cutting in a lot of locations. Lower oven temperatures, faster startups and less frequent washes make our product benchmark on the market. A real contribution to be even "greener"!

All in all, Hostmann-Steinberg does not just put a sticker on the can in order to sell more. The native German approach to always improve - even if we are already very good - doesn't come with bold letters like in a commercial. But it comes with impressive performance and - we have to admit it - most likely not at the cheapest rate. But can you really buy a chintzy ink if you want to be green?