

vegetable-based inks

The environmental impact of your marketing materials goes beyond the paper it is printed on – this is just the beginning. In this article, we take a look at vegetable based inks – an alternative in the printing process that can dramatically reduce your company's environmental footprint.

There are three main ingredients in the ink recipe – the pigment to create the colour, an oil based liquid that is mixed with the pigment, and a binding agent. Vegetable based inks date back to as early as 50 centuries ago in ancient China, and were made from soot blended with vegetable oil.¹ Inks were then developed over time to incorporate organic ingredients such as linseed, soy, corn and canola vegetable oils.

In the early 1960's, printers were introduced to petroleum-based inks. The faster drying times of these new inks enabled printers to speed up production times and improve their productivity, and were quickly embraced. Today petroleum-based inks are the most commonly used in the industry.

Whilst the cost and productivity benefits of petroleum-based inks are appealing, they come at an environmental cost.

During the drying process, the petrol and alcohol content of petroleum-based inks evaporate, releasing Volatile Organic Compounds (VOCs) into the atmosphere. These VOCs contain methane – a greenhouse gas that contributes to global warming – add to air pollution, and can cause harm to soil and groundwater.

Solvents are required to clean the print press after production – adding another source of VOCs to the process. Petroleum-based inks are also more difficult to remove from paper or "de-ink", making recycling more difficult and resulting in toxic waste.

Vegetable inks today are constantly being improved and can be made from vegetable oil derived from corn, walnut, coconut, linseed, canola and soy bean. They take longer to dry than petroleum based inks, but in the process release significantly fewer VOCs into the atmosphere. Water based cleaners can be used to clean the print press after production, resulting in a further reduction of VOCs. When paper products are recycled, vegetable based inks are much easier to remove from the paper, and produces less hazardous waste.

Vegetable-based inks can also produce brighter and more vibrant colours, and create a healthier working environment for printers.

If you are interested in using vegetable-based inks in your print materials, please contact Idaho for more information.

a quick comparison:

petroleum based inks	vegetable based inks
Fast drying time = faster production	Slower drying time = slower production
High level of VOCs released into the atmosphere	Low level of VOCs released into the atmosphere
Solvents required for cleanup	Water based cleanup
Harder to de-ink in the recycling process, resulting in toxic waste	Easier to de-ink in the recycling process, less hazardous waste
Non-renewable source	Renewable source
	Healthier print working environment
	Brighter colours
	Cost is the same or slightly higher, than printing with petroleum based inks

some Victorian-based printing companies that use vegetable based inks:

Finsbury Green Printing

46 Wirraway Drive
Port Melbourne
Victoria 3207
Phone: 03 9644 9644
www.finsbury.com.au

Mystique

25 Laser Drive
Rowville
Victoria 3178
Phone: 03 9764 9489
www.mystique.com.au