

Declaration on

Ethics, social responsibility and sustainability

Ethics and social responsibility

Siegwerk and its employees operate on the basis of a “Code of Business Conduct”. On the basis of this Code both Siegwerk and its employees represent the values of a family-owned business with a professional management. More precisely, this includes assuming responsibility towards society and the environment, towards our customers, employees, suppliers as well as our shareholders. The implementation of this responsibility involves a sensible use of resources, a respectful interaction among employees as well as the awareness of the consequences that arise from our activities. Compliance with the corporate policy means that Siegwerk employees observe applicable law and regulatory framework at all times and in any circumstance. Besides, they are advised to comply with the utmost ethical and moral standards as well as honesty in exercising their everyday activities.

Economic interests are equally important as health and environmental protection. Environmental protection and minimization of environmental impacts as well as the environmental compatibility of our products are basic principles of our activities. Siegwerk is committed to an open discussion with customers and end users, the public and other important partners along the value chain.

Siegwerk, the third biggest ink producer worldwide, is a multicultural employer. Our corporate goals can only be achieved through equal opportunities at the workplace as well as through diversity of staff.

Siegwerk is committed to fair and respectful working conditions. No person is to be discriminated or unfairly treated, disadvantaged, favoured or harassed because of race or ethnicity, colour, nationality, religion, ideology, gender, age, sexual orientation or physical characteristics or other protected classes in the particular country. Furthermore, Siegwerk expressly condemns and will not participate in or condone the use of child or forced labour.

In 2012, Siegwerk has joined **Sedex** (Supplier Ethical data Exchange), a not for profit membership organization dedicated to driving improvements in global supply chains. Hence Siegwerk has committed itself as the first printing ink manufacturer worldwide to continuously improve ethical performance along the supply chain. Please find more information on www.sedexglobal.com.

Sustainability of printed products

The production and supply of raw materials for printing inks as well as the production and supply of printing inks for printed matter is part of the entire manufacturing process of graphic articles and packaging. Material and energy consumption during ink manufacturing as well as carbon dioxide emissions have to be seen in proportion to the respective contributions of the final printed product. It should be considered that the percentage of printing

ink accounts for 0.5% to a maximum of 3% of the final printed product. A study by carbontrust with Walker's on the so-called "carbon footprint" of a crisps package showed that the printing ink accounts for not more than 1% of the entire carbon footprint of the final printed product. The same value holds true also for printed media like e.g. newspapers.

In the absence of acknowledged measurement criteria for the sustainable production of printed matter the following considerations will show Siegwerk's contribution to the sustainability of printed products:

1. Printing inks and the environment

Raw materials for printing inks are produced in compliance with pertinent legislation. Legislation and regulations in industrialized countries and also increasingly in emerging countries, are safeguarding tolerated and generally minimized environmental impacts. This affects not only energy use and carbon footprint, but also emissions into air, water and soil as well as waste, respectively the minimization of waste. The same applies to the production and supply of printing inks. The Siegwerk headquarter in Siegburg (Germany) is certified in accordance with standard ISO 14001; most of Siegwerk's major production facilities (Centers of Excellence) around the world are also certified.

Generally, printing inks for all applications are optimized with respect to their toxicological profile. The use of toxic or ecotoxic substances with potentially negative effects on consumer's health and on the environment is excluded¹.

2. Renewable raw materials

Compared to chemical products in general, which are largely manufactured on petrochemical sources, printing inks have always been based on a high amount of renewable raw materials. Vegetable oils, rosin and fatty acid esters are the main starting substances for resins used for newspaper and magazine printing inks; cellulose is the main starting substance for nitrocellulose which is the main binder in packaging inks. All of these starting substances contribute considerably to the minimization of the carbon footprint of ink raw materials. Also to be mentioned are water-based liquid printing inks which represent a market share of nearly 100% on so-called absorbent substrates. In this case, water substitutes the usually non-renewable volatile organic compounds (VOC), used in solvent-based liquid printing inks.

3. Contribution to sustainability – reuse and recycling of printed matter

Thanks to the largely optimized deinkability of printing inks in the deinking process, the recyclability of graphic articles is a given fact. Furthermore, printing inks do not affect the biodegradability and accordingly the compostability of the final graphic article.

In Europe, guidance for evaluating the sustainability for packaging is given by the following standards: EN 13427 ("Umbrella Standard"), EN 13428 ("Prevention by Source Reduction"), EN 13429 ("Reusable Packaging"), EN 13430 ("Material Recycling"), EN 13431 ("Energy Recovery"), as well as EN 13432 ("Organic Recovery"). According to current knowledge, printing ink is not seen as a component which has to be taken into account as a determining factor when applying these standards. Printing inks have to be considered specifically only with

¹ EuPIA exclusion list for printing inks and related products, www.eupia.org.

regard to the compostability of printed packaging². Siegwerk's printing inks and print solutions in general allow for the production of packaging in accordance with standard EN 13432.

Please feel invited to have a look at our Sustainability Brochure on www.siegwerk.com with plenty of additional information.

² "Understanding the CEN Standards on Packaging and Environment", Europen, February 2006, www.europen.be.