

## Declaration on the

### Absence of lead, cadmium, mercury and hexavalent chromium

The **European Directive 94/62/EC**<sup>1</sup> on packaging and packaging waste, and the regulation of the **Coalition of Northeastern Governors (CONEG)** of the USA, require that:

The sum of the concentration levels of lead, cadmium, mercury and hexavalent chromium present in packaging or packaging components shall not exceed 100 ppm.

In **China, Standard QB 2930.2-2008 “Limits and determination method of certain toxic elements in printing ink - Part 2: lead, mercury, cadmium, chromium(VI)”** provides the following max. thresholds for what is called “printing inks”<sup>2</sup>:

The sum of the concentration levels of lead, cadmium, mercury and hexavalent chromium shall not exceed 100 ppm.

Siegwerk<sup>3</sup> herewith confirms that generally, since years and even since decades, for the manufacture of all products supplied to customers worldwide, thus as well for all products supplied to individual customers anywhere in the world, no raw materials containing lead, cadmium, mercury and hexavalent chromium are intentionally added<sup>4</sup>.

Additionally, out of an abundance of caution, Siegwerk, since years and even since decades, requires information from its raw material suppliers worldwide, and in particular from manufacturers of pigments (which historically could contain heavy metal traces) worldwide. Based on their information, Siegwerk is assured that the potential impurities of these toxic metals are by several orders of magnitude below 100 ppm.

In fact, **Siegwerk has implemented since years a comprehensive raw material introduction process which is based on a centrally coordinated approval via its Corporate Department Global HSE + Sustainability, and which is operated on a worldwide basis.** With this process, which is also applied backwards to currently used raw materials, Siegwerk safeguards the retrieval of comprehensive documentation from all concerned suppliers. The related documentation includes data for all potential impurities of these toxic heavy metals. Siegwerk requires suppliers to confirm that these data are representative for all deliveries for the raw material. With the exception of those cases where Siegwerk’s raw material approval experts determine that historical evidence and complete knowledge of the manufacturing

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<sup>1</sup> As amended by Regulation (EC) No 1882/2003, Directive 2004/12/EC, Directive 2005/20/EC, and Regulation (EC) No 219/2009.

<sup>2</sup> The standard is applicable to both printing inks and ink printing products.

<sup>3</sup> Formal commitment is taken by Siegwerk companies worldwide.

<sup>4</sup> It is a known fact that in certain regions of the world, raw materials containing these heavy metals are still used in ink formulations.

process prove no concern, suppliers are asked to document their data via investigations made on samples which are representative for their production (raw materials, processes, facilities).

Finally, again out of an abundance of caution and for further security, Siegwerk has conducted and documented - under the supervision of its Global HSE + Sustainability department - **very comprehensive random sampling on all Siegwerk sales products worldwide, focusing on all manufacturing processes of all Siegwerk production sites worldwide**<sup>5</sup>. Hundreds of **trace analyses** were performed – covering the period starting even 25 years ago up to very recent days - by recognized laboratories using reliable methods<sup>6</sup>. The results showed that in Siegwerk products worldwide **all values of all single heavy metals were by several orders of magnitude below 100 ppm**, thus it is to be concluded that the safety margin is more than satisfactory. Currently, Siegwerk is following this topic by performing regular spot check analysis on a worldwide basis.

Therefore, although Siegwerk, in line with the practices of the ink industry worldwide and drawing the proper conclusions from the investigation program which demonstrates that absolutely no concern can be perceived with its products, does not run verification of individual products or batches nor periodical control schemes, nor offers such ones to customers, **all products supplied by Siegwerk are fully in line with the state-of-the-art of heavy metals traces control. Consequently they are in full compliance, and/or allow to the responsible of the final packaging the full compliance with the above-mentioned regulations.**

#### Noxious and other hazardous substances

In Europe, the standard EN 13428:2004 regarding to the compliance of packaging with the European Directive 94/62/EC on packaging and packaging waste requires the minimisation of designated “noxious and other hazardous substances”. It refers to the transmission of information on the concentration of substances classified as “dangerous for the environment” under the CLP Regulation (EC) No 1272/2008.

EN 13428 refers to a related Technical Report, CR 13695-2, which clarifies that the minimisation requirement applies only to package itself, or to the ash from incineration of the packaging, when

- the package or the ash is sent to a landfill site and
- where the levels of such substances have been intentionally added and are in excess of 0,1% in the landfilled waste.

Siegwerk advises that his safety data sheets of products supplied to customers will list, in the section on the composition, all substances classified as “dangerous for the environment” and present in the product(s) as supplied, at a concentration exceeding the regulatory threshold for disclosure.

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<sup>5</sup> In particular, Siegwerk products marketed and/or produced in Asia (China, South East Asia, Indonesia, India) were also extensively covered by these investigations.

<sup>6</sup> In particular: CEN/CR 13695-1 “Requirements for measuring and verifying the four heavy metals present in packaging” (Europe); EPA Test Method 3051a (USA); QB 2930.2-2008 “Limits and determination method of certain toxic elements in printing ink - Part 2: lead, mercury, cadmium, chromium(VI)” (China), and equivalent methods.