

## Heavy metals in Pigmenol colours

Because there are no data available based on measurements of heavy metals in our Pigmenol colours, we have to estimate the content of heavy metals according to the best of our knowledge from the data given for the raw materials.

Solvents and binding system in our Pigmenol colours are almost free from Heavy metals (max. 5 ppm).

Heavy metals worth mentioning are delivered by the pigments. Their typical content is below the given limits:

Antimony:	max. 25 ppm
Arsenic:	max. 25 ppm
Barium:	max. 100 ppm
Lead:	max. 25 ppm
Cadmium:	max. 25 ppm
Chromium:	max. 25 ppm
Mercury:	max. 25 ppm
Nickel:	max. 25 ppm
Selenium:	max. 25 ppm
Zinc:	max. 25 ppm

According to the information given by our supplier the above mentioned limits for Heavy metals are in accordance with EU Directive 94/62/EG for packing and waste packing and the limits for the sum of Cadmium, Chromium (VI), Lead and Mercury are fulfilled.

The manufacturer of the pigments is emphasizing that close contact of the colour formulation with metal surfaces may lead to migration of metals producing higher levels of some Heavy metals, for example of Chromium and Nickel through contact to stainless steel.

Our supplier told us that there is no quality control for each batch but a spot check of the total amount of Heavy metals. In case of exceeding the limit an acidic extract is analyzed according to ISO-method 6713 followed by Atomic Absorption Spectroscopy (AAS) or Inductive Coupled Plasma Spectroscopy (ICP).

Sometimes a metal (e.g. Barium) is especially added to obtain "a requested constitution". In this case it is not possible to fulfil the demands for the limits of Heavy metals:

Red pigments may contain Barium, Pigmenol Red 22 20 32 for example up to 1.2 % Barium (dissolved and organically bonded). This colour of course is exceeding the above mentioned limits.

We hope this information helps solving your problems. But please feel free to contact us, if there are more questions.

Best regards

SCHABOS GmbH