

Coating of shipping and transport containers – new manufacturing guidelines in China starting 2017



Background

About 95% of the production of internationally standardized transport containers takes place in China. For decades, containers have been painted using solvent-based paints. This has put a substantial burden on humans and the environment alike. For health reasons and to protect the environment, container manufacturers and suppliers have committed to complying with a new set of rules regarding container coating. The switch was initiated for South China in July 2016 and manufacturing companies throughout the country will have completed the conversion until April 2017. The regulations prohibit the further use of solvent-based paints systems on standard containers in favor of water-based paints. Water-based paints have been successfully tested for container coatings since 1990. All producers will have to comply with the new rules, as the changeover does not allow for exceptions.

Where does the problem come from?

As part of the production process, the solvents in the coating evaporate and are carried into the atmosphere. Not only does this directly harm humans and the environment, but also leads to complications later on.



Issues with the use of solvent-based paints

Through evaporation, so-called VOCs (Volatile Organic Components) are released. VOCs are vapor compounds of organic origin, which attack the ozone layer and can have many other negative long-term effects. This also puts the health of factory workers at risk because the vapors may irritate mucous membranes, the eyes, and lung tissue. Excessive exposure to VOCs has also been associated with carcinogenic, mutagenic and reprotoxic effects.

What is changing at production?

In Western industrialized countries, water-based paints have been used in the productions of industrial goods for many years. This development of recent years is now being applied in China as well. The CCIC (China Container Industry Association) has issued regulations that all market participants will have to comply with. To ensure fair competition in the local market, the rules will be enforced across China until April 2017.

What needs to be considered for container purchase?

The switch will predictably cause prices to rise, because the cost of production will increase significantly. The new color system costs a little more and is more demanding in its application. The coatings must be applied carefully to achieve the desired quality. The drying process of the waterborne coatings is significantly more delicate than that of solvent-based paints. Compliance with the specifications regarding humidity, temperature and ventilation during the drying process is essential to achieve the desired results. Factories have to invest in ventilation and general logistics. There are also stricter guidelines regarding the processing of paints. These changes in parameters lead to increasing costs.

What is our contribution to the switch?

CHS Container Group supports the initiative lead by the CCIC and the Chinese government, because there are considerable advantages for all parties involved. We have always placed great emphasis to a consistently high quality of coating of our containers. For this reason we have been working closely with one of the leading and innovative manufacturers of protective systems for metal surfaces – the Hempel company – since the beginning. The new water-based color systems offer superior long-term protection for the containers, while at the same time reducing negative impacts on people and the environment.



What is our conclusion?

Waterborne paints do not only provide benefits for the environment, but also for the customers. If the water-based paints are applied correctly, they ensure a high shadestability. This switch is not only a win for the protection of health and the environment, but also leads to higher quality paint surfaces for the containers.

If you have further questions about the process or the new color, don't hesitate to get in touch with us – we will gladly advise you. We can also supply the technical specifications of the new color systems on request.