



PROTECH

OXYPLAST



Good2know

Tuesday

GOOD2KNOW – 03/11/2015
Process instructions

Good2know that... the cage of Faraday can have an influence when using corona powder coating equipment.

Comparing tribo and corona spraying, we have already briefly mentioned the Faraday effect. The principle of the Faraday cage is important to take into account when applying powder coating, in case the following criteria are present:

- Corona spraying system
- To be sprayed object(s) with cavities, of which the depth supersedes the width
- Metal substrates

In theory is stated that the Faraday cage is an enclosure formed by [conductive material](#) (such as metal or steel), used to block [electric fields](#). In powder coating, the phenomena only presents itself when corona-charging as it is the only spraying method during which the air gets charged and an electrostatic field is created (when tribo-charging, it is the powder that gets charged through friction in the spraying gun, so no electrostatic field arises).

When an object with a cavity gets corona-sprayed, it will be difficult to apply a consistent powder coating layer inside of the crook, as the powder wants to travel the shortest path to the object and turns off towards the edges and borders instead of further penetrating into the cavity.

To obtain the best result in the above mentioned problem posing, you can try to keep moving your spraying gun, lower the power of your equipment, and inserting the spraying gun in the crook with the least air pressure possible after which you slowly pull it backwards, out of the cavity. In other cases, consider using other powder coating techniques on forehand.

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