

## STÜBBE GMBH & CO. KG

HOLLWIESER STR.5  
32602 VLOTHO

FON: +49 5733 799 0  
FAX: +49 5733 799 200

MAIL: CONTACT@STUEBBE.COM  
WEB: WWW.STUEBBE.COM

# STÜBBE

## GENERAL DESCRIPTION OF THE LABS-FREE CLEANING PROCESS

The LABS-FREE cleaning process at STÜBBE, is a combination of wet-chemical pre-cleaning, if necessary, and cleaning using low-pressure plasma technology. Cleaning takes place in a specially designated area. There the individual parts are cleaned, inspected, and the articles are completely assembled and packed.

### WET-CHEMICAL PRE-CLEANING

Depending on the degree of contamination, pre-cleaning is carried out in an industrial washing plant. The water provided with cleaning agents is treated by an integrated multi-stage filter system and used several times. The water quality is checked regularly. Water and filters are replaced depending on their degree of contamination. After the washing process, the components are dried using a circulating air drying system integrated in the cleaning unit.

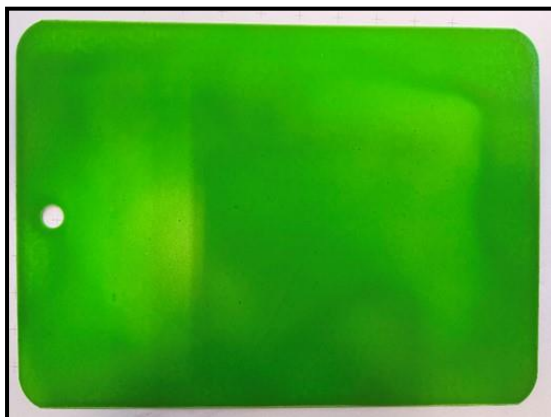
### CLEANING WITH LOW-PRESSURE PLASMA

All components are subjected to intensive cleaning with low-pressure plasma, irrespective of the wet-chemical pre-cleaning. This enables the fulfillment of LABS cleanliness requirements. Depending on the material, it also goes into the depth of the component and thus provides a long-lasting cleaning effect, especially with elastomers, without damaging the materials.

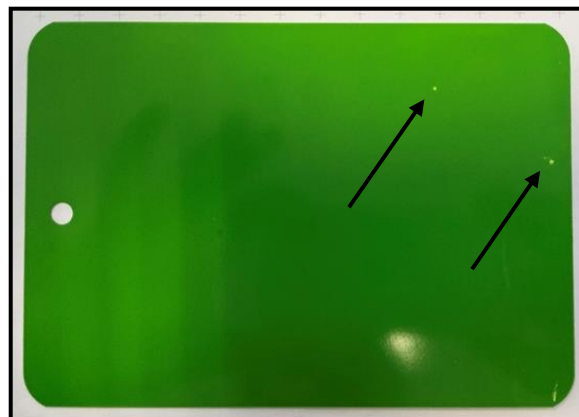
### TESTING

Unless otherwise agreed, the test is performed by means of a "solvent test" based on PV 3.10.7. The test medium flushed over the test specimen is collected on a test plate and dries there. The test sheet is then coated with an opaque coating and the coating result is evaluated. The test medium is a mixture of three different solvents.

Example of results for a positive and a negative test



WITHOUT PAINT DEFECT = O.K.



CIRCULAR PAINT DEFECTS = N.O.K.

After passing the test, the parts are assembled, if necessary, packed in PE bags, welded airtight and marked with a "LABSFREI" label.

### Mathias Wind

Production manager