



valid until: April 17, 2029

Fraunhofer

TESTED[®] DEVICE

Kawasaki Robotics GmbH
Kawasaki MC006V
Report No. KA 2311-1476

DUPLICATE

Statement of
Qualification

Single product
Riboflavin Test
(Equipment)

Statement of Qualification · Single product

Customer

Kawasaki Robotics GmbH
Im Taubental 32
41468 Neuss
Germany

Component tested

Category: Automation Components
Subcategory: Robotics
Product name: Kawasaki MC006V
(manufacturing date: 12/2021; color: silver (shiny); weight: 44 kg; serial number: MC0060006)

Cleanability test (riboflavin test)

Standards/Guidelines: VDMA information sheet »Riboflavin test for low-germ or sterile process technologies – Fluorescence test for examination of cleanability«. The norms stated generally refer to the version valid at the time of the tests.

Test environment parameters: Laboratory

Test procedure parameters:

- Test solution:0.2 g riboflavin, 1.0 g hydroxethylcellulosein 1000 ml ultrapure water
- Application of test solution: pump spray
- Drying time: approx. 2 - 3 h
- Cleaning method: wiping
- Cleaning medium: ultrapure water
- Number of wiping cycles: 3
- UV-light: $\lambda = 366 \text{ nm}$

The cleanability is examined and assessed qualitatively. The assessment is based on the amount and size of defects occurring.

Test result / Classification

The robot Kawasaki MC006V can be cleaned simply by wiping it with ultrapure water. However, the fluorescence test identified several critical areas. Only a few critical areas could be detected by the fluorescence test.

| System component | Assessment of cleanability |
|------------------|----------------------------|
| Kawasaki MC006V | very good |

DUPLICATE

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The measuring devices used for the qualification tests are calibrated at regular intervals; their results can be traced back to national and international standards. In cases where no national standards exist, the test procedure implemented complies with the technical regulations and norms applicable at the time of the test. The relevant documentation can be viewed on request at any time.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.

Fraunhofer Institute for Manufacturing Engineering and Automation IPA

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Department of Ultraclean Technology and Micromanufacturing

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Nobelstrasse 12
70569 Stuttgart
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on behalf of 
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