

Fraunhofer

TESTED® DEVICE

KUKA Deutschland GmbH LBR iisy 11 R1300 CR **Report No. KU 2303-1404**

Single product
Outgassing Behavior
Inorganic Acids

Qualification Certificate

This is to certify that the product mentioned above, provided by

KUKA Deutschland GmbH Augsburg, Germany

has been awarded a Fraunhofer certificate TESTED DEVICE bearing the report number KU 2303-1404.

The outgassing behavior of the LBR iisy 11 R1300 CR in operation (color: white and orange) at the stated temperature was investigated according to VDI 2083 Part 17 and ISO 14644-15. Based on the outgassing rates determined for the specific units, the following material classification was made for the corresponding Contaminant Category:

| Contaminant Category (x) | SER_u¹¹ 23°C [g/unit·s] | ISO-ACC _e Class (x) based on 23°C |
|--------------------------------|---|---|
| HF | < 7.0 x 10 ⁻⁹ | < -8.2 |
| HCI | < 7.0 x 10 ⁻⁹ | < -8.2 |
| HBr | < 7.0 x 10 ⁻⁹ | < -8.2 |
| HNO ₃ | < 7.0 x 10 ⁻⁹ | < -8.2 |
| H ₃ PO ₄ | < 7.0 x 10 ⁻⁹ | < -8.2 |
| H ₂ SO ₄ | < 7.0 x 10 ⁻⁹ | < -8.2 |

¹⁾SER_{..}: Unit-specific emission rate

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Report No. first document

Stuttgart, May 22, 2024

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Place, current date

on behalf of A Project Manager Fraunhofer IPA



This document only applies to the named product in its original state and is valid for a period of 5 years from the date the first document was issued.

The document can be verified under

www.tested-device.com.

Detailed information and

