



Fraunhofer

TESTED[®] DEVICE

ebm-papst Mulfingen
Impeller Radical PPGF40
Report No. EB 1703-895

Outgassing Behavior Inorganic Acids

Qualification Certificate

This is to certify that the product mentioned above, provided by
ebm-papst Mulfingen GmbH & Co. KG
Mulfingen, Germany

has been awarded a Fraunhofer certificate TESTED DEVICE
bearing the report number EB 1703-895.

The outgassing behavior of the Impeller Radical PPGF40 Size
400 * -1-3233 (color: black) at the stated temperatures was investigated according to VDI 2083 Part 17. Based on the outgassing rates determined for the specific surfaces, the following material classification was made for the corresponding substance group:

Substance Group (x)	SER ¹⁾ 23 °C [g/m ² s]	SER ¹⁾ 90 °C [g/m ² s]	ISO-ACC _m class (x) based on 23 °C
HF	6.1 x 10 ⁻¹⁰	<5.8 x 10 ⁻¹⁰	-9.2
HCl	2.2 x 10 ⁻⁹	2.5 x 10 ⁻⁹	-8.7
HBr	2.9 x 10 ⁻⁹	1.1 x 10 ⁻⁹	-8.5
HNO ₃	2.5 x 10 ⁻⁹	2.1 x 10 ⁻⁹	-8.6
H ₃ PO ₄	<5.8 x 10 ⁻¹⁰	2.3 x 10 ⁻⁹	<-9.2
H ₂ SO ₄	1.3 x 10 ⁻⁹	9.0 x 10 ⁻¹⁰	-8.9

¹⁾ SER: Surface Specific Emission Rate

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

Stuttgart, April 24, 2017

Place, date of first document issued

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Place, current date

on behalf of 
Frank Bürger, Project manager Fraunhofer IPA

The validity of this certificate applies only to the mentioned product in this particular condition for a duration of 5 years.

Further information:

www.tested-device.com

DUPLICATE