

Section 10

EU Declaration of Conformity

EU DECLARATION OF CONFORMITY

1. PPE: FFP 2 NR, product code: 4270001575807

2. Manufacturer:

Befor

Now

SKG Bahndienste GmbH
Gotenstrasse 18
20097 Hamburg- GERMANY

SKG Production GmbH
Südring 40
21465 Wentorf bei Hamburg - Germany

This declaration of conformity is issued under the sole responsibility of the manufacturer:

SKG Bahndienste GmbH

3. *Object of the declaration: Respiratory Filtering Half Mask FFP2 NR*

4. The object of the declaration described in point 4 is in conformity with the relevant Union harmonisation legislation: PPE Regulation 2016/425

5. References to the relevant harmonized standards used, including the date of the standard, or references to the other technical specifications, including the date of the specification, in relation to which conformity is declared: EN 149:2001+A1:2009

6. The notified body BSI Group NB 2797 performed the EU type examination (Module B) and issued the EU type-examination certificate CE 732858 EU Type Examination Certificate.

7. Where applicable, the PPE is subject to the conformity assessment procedure -conformity to type based on internal production control plus supervised product checks at random intervals (Module C2) certificate CE 732860 under surveillance of the notified body BSI Group NB number: 2797.

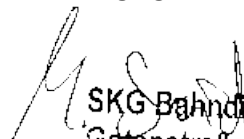

8. Additional information:

Signed for and on behalf of: SKG Bahndienste GmbH/SKG Production GmbH

Hamburg, 07.08.2020

Mr Munir Said, Managing Director

signature:


SKG Bahndienste GmbH
Gotenstrasse 18
20097 Hamburg 

Section 10

EU Konformitätserklärung

EU Konformitätserklärung

1. PSA: FFP 2 NR, Product code: 4270001575807

2. Hersteller:

Bevor

Jetzt

SKG Bahndienste GmbH

SKG Production GmbH

Gotenstrasse 18

Südring 40

20097 Hamburg- GERMANY

21465 Wentorf bei Hamburg - Germany

Diese Konformitätserklärung wird unter der alleinigen Verantwortung des Herstellers ausgestellt:

SKG Bahndienste GmbH jetzt SKG Productions GmbH

3. Gegenstand der Erklärung: Filtierende Halb Maske FFP2 NR

4. Der Gegenstand der in Nummer 4 beschriebenen Erklärung entspricht den einschlägigen Rechtsvorschriften zur Harmonisierung der Union: PSA-Verordnung 2016/425

5. Verweise auf die relevanten verwendeten harmonisierten Standards, einschließlich des Datums der Norm, oder Verweise auf die anderen technischen Spezifikationen, einschließlich des Datums der Spezifikation, in Bezug auf die Konformität erklärt wird: EN149: 2001 + A1: 2009

6. Die benannte Stelle BSI Group NB2797 hat die EU-Typprüfung (Modul B) durchgeführt und das EU-Musterprüfzeugnis CE 732858 EU-Musterprüfzeugnis ausgestellt.

7. Sofern zutreffend, unterliegt die PSA dem Konformitätsbewertungsverfahren - Konformität mit typbasierten internen Produktionskontrollen sowie überwachten Produktprüfungen in zufälligen Abständen (Modul C2) Zertifikat CE 732860 unter Überwachung der benannten Stelle BSI Group NB Nummer: 2797.

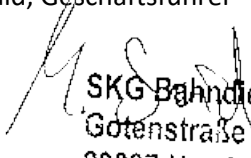

8. Zusätzliche Informationen:

Unterzeichnet für und im Auftrag von: SKG Bahndienste GmbH / SKG Production GmbH

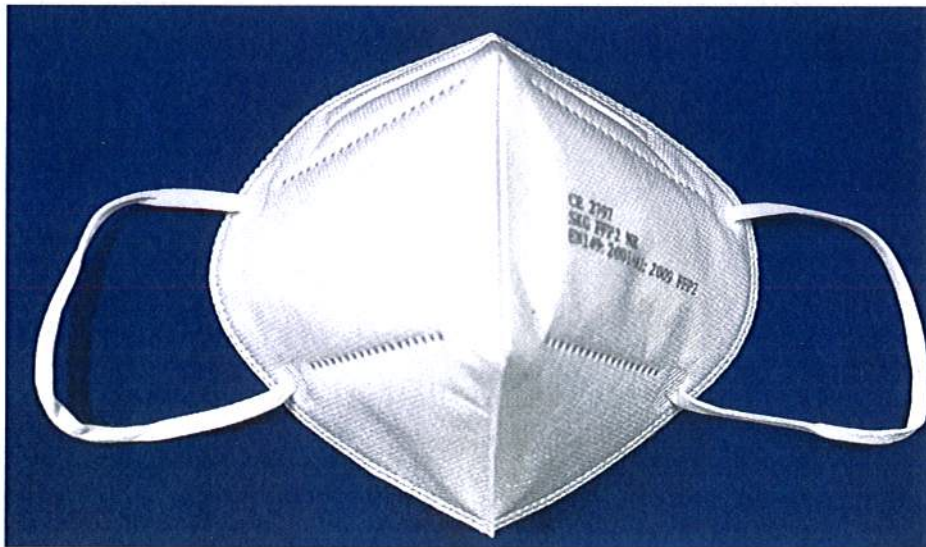
Hamburg, 07.08.2020

MrMunir Said, Geschäftsführer

Signatur:


SKG Bahndienste GmbH
Gotenstrasse 18
20097 Hamburg 

EFFICIENCY TESTS ON RESPIRATOR MASKS



TEST REPORT S-SKG 201101

Mainleus, November 16th, 2020

according DIN 71460-1

initiated by:

SKG Productions GmbH

1. Objectives and test set-up

This test project focused on the initial efficiencies on respirator masks and the test procedure below. All test conditions and parameters not given will be chosen according to DIN 71460-1.

The test shall indicate which filtration efficiency the new masks could provide in a (respirator mask) test tested according EN149, chapter 8.11 / EN 13274-7. Leaks in finished masks are not considered. Potential leaks between for example a human face and the masks are not considered.

Important note: This is not a classification (FFPx-grades) according EN149. EN149 describes several additional tests and requirements on finished masks (usage and efficiency tests after different storage and conditioning simulations as well as mechanical strength tests, leakage in real use, dust loading ...).

a) Test requested by:	SKG Productions GmbH
b) Test specimen / Construction:	CE 2797 SKG FFP2
c) Media type:	Synthetic
d) Manufacture date:	N/A
e) Lot number:	N/A
f) Dimensions:	N/A
g) Samples received on:	November 12 th , 2020
h) Test performed on:	November 13 th , 2020

Test conditions:

Flow rate:	95 l/min
Temperature:	23°C ± 1°C
Relative humidity:	50% ± 3%
Absolute pressure:	982 mbar
Particle efficiency size range:	0,3 – 5 µm
Particle counter:	Optical Particle Counter, TSI Inc., Model 3330
Test aerosol:	Paraffin oil + Sodium Chloride

Comments / Information on EN 149, Chapter 8.11 / EN 13274-7:

Test aerosol:	Sodium Chloride (NaCl) + Paraffin oil. Efficiencies with NaCl are usually higher than with paraffin oil.
Particle detector:	It is referenced to EN 13274-7 in which a photometer is used. A photometer usually measures the sum of all particles (as a volume or mass signal) > ca. 0,2 µm and does not differentiate in small particle size ranges. The aerosol concentration in this test is noticeable lower than a test with a photometer (EN 13274-7). A possible loading effect with high amounts of the aerosol is therefore not considered.

The accuracy of the flow rate control is 3% of the nominal value. Pressure drops were measured using three sensors of the ranges 0 – 100 Pa, 0 - 500 Pa and 0 - 3000 Pa. The accuracy of the pressure transducers is 1% of the range maximum.

The paraffin oil aerosol was generated by an atomizer ATM 220 (Topas GmbH). The test aerosol was not electrostatically neutralized.

The sodium chloride aerosol was generated by an atomizer AGK 2000 (PALAS GmbH). They have not been electrostatically neutralized.

The fractional filter efficiency graphs were derived from a total of six to eight measurements of particle size distributions. Minimum three measurements were taken upstream and min. three were taken downstream of the filter. The figures and the tables in the attachments show the average values of the three efficiency measurements as well as the total scattering range for each size channel.

2. Results

The detailed results are reported in the attachment.

Table 1: Summary of the pressure drop results

S-SKG 201101-	95 l/min	160 l/min
M1	124	214
M2	125	230

Table 2: Summary of the efficiency results

Particle size (optical) [µm]	M1 – NaCl [%]	M1 – Paraffin oil [%]
0,33	99,9	99,3
0,42	99,9	99,7
0,52	99,9	99,8
0,65	99,9	99,8
0,80	99,9	99,9
1,00	99,9	99,9
1,25	99,9	99,9
1,55	>99,9	99,9
1,93	>99,9	99,9
2,41	>99,9	>99,9
3,00	>99,9	>99,9
3,86	>99,9	>99,9
4,94	>99,9	>99,9

Table 3: Summary of the efficiency results

Particle size (optical) [µm]	M2 – NaCl [%]	M2 – Paraffin oil [%]
0,33	>99,9	99,5
0,42	>99,9	99,6
0,52	>99,9	99,8
0,65	>99,9	99,8
0,80	>99,9	99,8
1,00	>99,9	99,9
1,25	>99,9	99,9
1,55	>99,9	99,9
1,93	>99,9	99,9
2,41	>99,9	99,9
3,00	>99,9	>99,9
3,86	>99,9	>99,9
4,94	>99,9	>99,9

Experience has shown that the values of the efficiency measured with a photometer correspond to the values of ca. 0,5 -0,6 µm of the fractional efficiency values measured with the TSI OPC. But this is only an indication and may vary slightly to other particle sizes.



Matthias Eber
 (Managing Director)



i.A. Vanessa Grampp
 (Lab Technician)

No. of attachments: 1

Attachment 1 to test report S-SKG 201101

Summary of test results

CE 2797 SKG FFP2

fiatec-no.: S-SKG 201101-M1 + M2

1. Particle collection efficiency

Test aerosol:	Paraffin oil + NaCl	Particle counter:	TSI OPC 3330
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Flow rate: 95 l/min	M1 - NaCl		M1 - Paraffin oil	
Particle size (optical)	η_{mean}^*	Δ_{max}^{**}	η_{mean}^*	Δ_{max}^{**}
[μm]	[%]	[%]	[%]	[%]
0,33	99,9	0,0	99,3	0,0
0,42	99,9	0,0	99,7	0,0
0,52	99,9	0,0	99,8	0,0
0,65	99,9	0,0	99,8	0,0
0,80	99,9	0,0	99,9	0,0
1,00	99,9	0,0	99,9	0,1
1,25	99,9	0,0	99,9	0,0
1,55	>99,9	0,0	99,9	0,0
1,93	>99,9	0,0	99,9	0,0
2,41	>99,9	0,0	>99,9	0,1
3,00	>99,9	0,0	>99,9	0,0
3,86	>99,9	0,0	>99,9	0,0
4,94	>99,9	0,0	>99,9	0,0

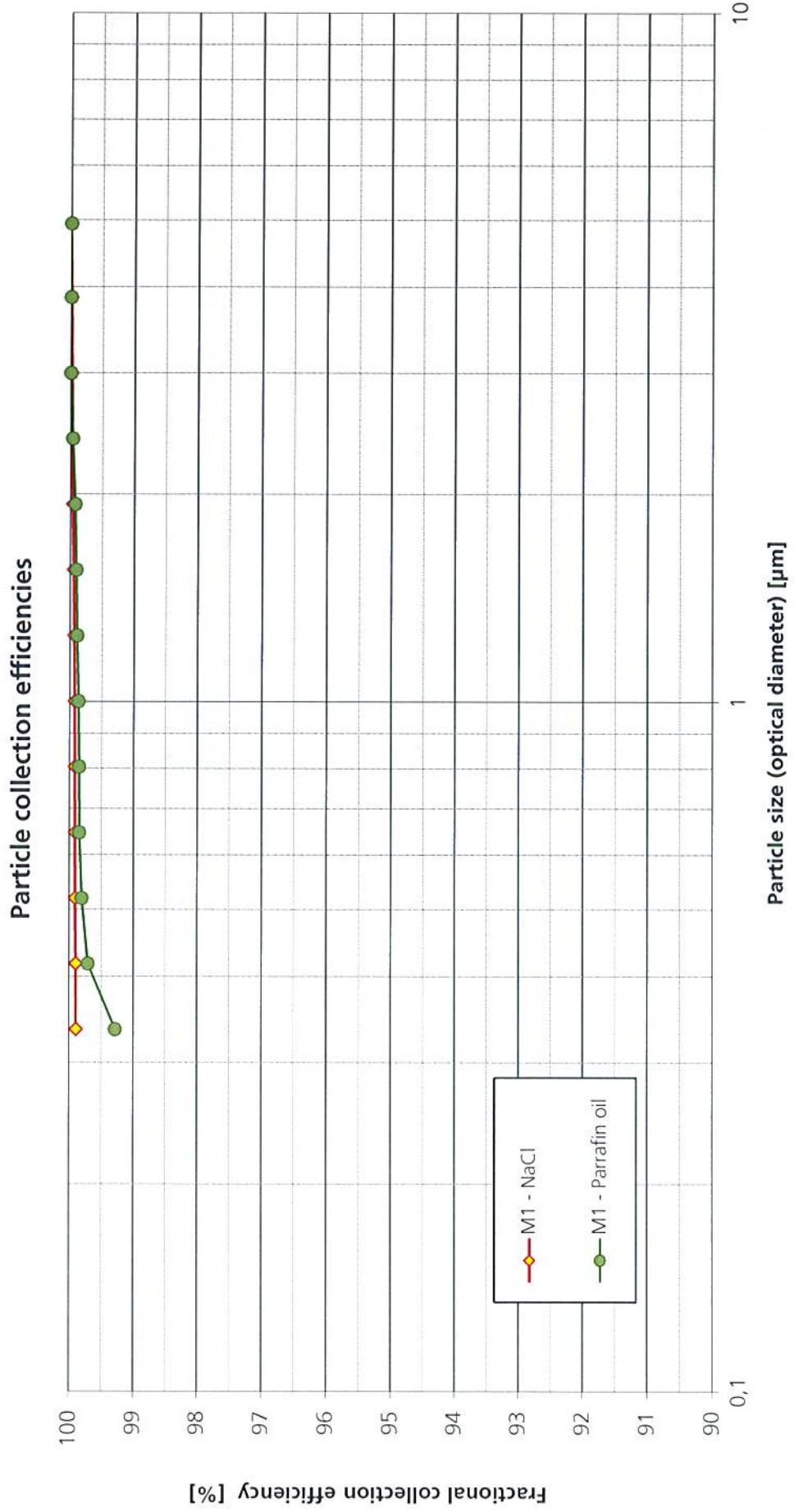
Flow rate: 95 l/min	M2 - NaCl		M2 - Paraffin oil	
Particle size (optical)	η_{mean}^*	Δ_{max}^{**}	η_{mean}^*	Δ_{max}^{**}
[μm]	[%]	[%]	[%]	[%]
0,33	>99,9	0,0	99,5	0,0
0,42	>99,9	0,0	99,6	0,1
0,52	>99,9	0,0	99,8	0,0
0,65	>99,9	0,0	99,8	0,0
0,80	>99,9	0,0	99,8	0,0
1,00	>99,9	0,0	99,9	0,0
1,25	>99,9	0,0	99,9	0,0
1,55	>99,9	0,0	99,9	0,1
1,93	>99,9	0,0	99,9	0,0
2,41	>99,9	0,0	99,9	0,1
3,00	>99,9	0,0	>99,9	0,1
3,86	>99,9	0,0	>99,9	0,0
4,94	>99,9	0,0	>99,9	0,0

* η_{mean} is the average particle collection calculated from three sets of up- and downstream measurements

** Δ_{max} represents the full scattering range of single values for each size channel

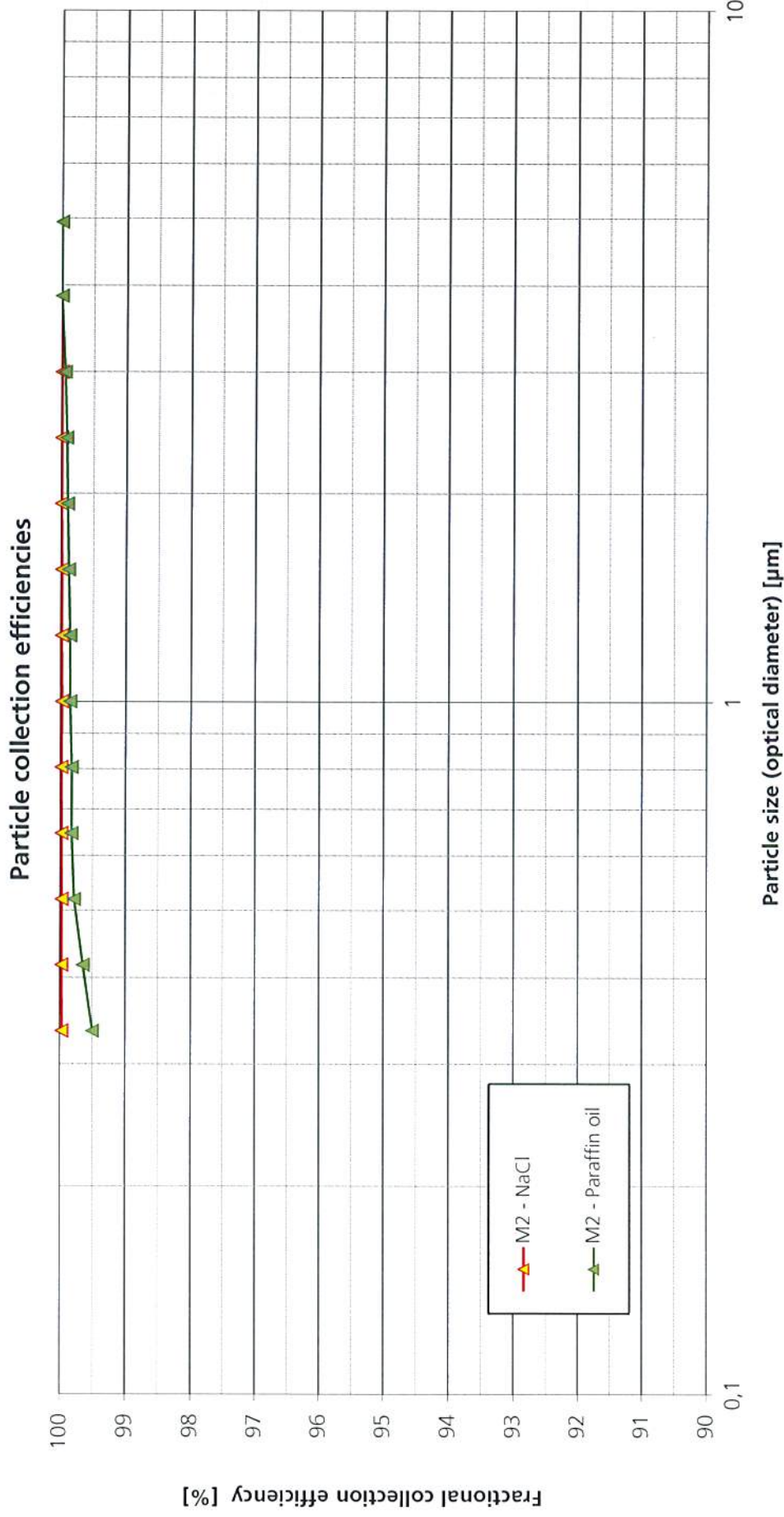
2. Pressure drop

Flow rate:	[l/min]	95	160
M1	[Pa]	124	214
M2	[Pa]	125	230



Customer: SKG Productions GmbH
fiatec no.: S-SKG 201101-M1
Sample: CE 2797 SKG FFP2

Flow rate: 95 l/min
Test aerosol: Paraffin oil + Sodium Chloride
Date: 13.11.2020
Particle counter: TSI OPC 3330



Customer: SKG Productions GmbH
fiatec no.: S-SKG 201101-M2
Sample: CE 2797 SKG FFP2

Flow rate: 95 l/min
Test aerosol: Paraffin oil + Sodium Chloride
Date: 13.11.2020
Particle counter: TSI OPC 3330