



## Textile barrier efficiency and air permeability test results

This document certifies the results of the mentioned test(s) carried out under controlled conditions <b>on fabrics</b> for COVID-19 cloth masks. <i>Instrument calibration certificates available on request.</i>	
Samples submitted by: SVENMILL	Test conditions supervised by: A Gericke Dept. of Chemistry and Polymer Science, University of Stellenbosch
Responsible person: B GREENBLATT	
Test Dates: 29 May 2020	
End use: Cloth masks	

**TEST METHOD:** Barrier efficiency test based on ISO14644 – adapted to measure the efficiency of textile fabrics and filter materials for use in cloth face masks to be used during COVID-19 pandemic. (The purpose of these masks is to prevent transmission of small respiratory droplets from the wearer to the environment. Cloth masks are not PPE). The test method is based on the attainment of a 5 micron particle count after transmission of an air stream through the sample and an air flow rating that represents the air permeability of the sample.

Results are rated on a 4-point scale as shown below to prevent misinterpretation.

<b>RATING:</b>	1	2	3	4
Explanation:	Very poor	Poor	Good	Excellent
Value (B)	0-25%	25-50%	50-75%	75-100%
Value (AP)	0-25%	25-50%	50-75%	75-100%

SAMPLE REF	Layers	Barrier rating 5 micron	Air flow rating
WARPKNIT – FILTER – PC5050(washed)	3	4	2
WARPKNIT- PC5050 (washed)	2	4	2

Note that the barrier efficiency of the combination including the filter was about 8% higher than those without. The filter did not affect the breathability

### University Disclaimer regarding tests done on textile fabrics intended for cloth face masks:

Stellenbosch University (“SU”) does not have the authority to certify or approve face masks or any component used in its manufacturing. The only certifying authority is the South African Bureau of Standards. Although the testing of textile fabrics and filter materials are carefully conducted by SU, no guarantees or warranties are made by SU for the effectiveness and quality thereof. Test results are based on the samples as received and tested.

SU does not accept any liability whatsoever arising from the use of this report by the client/recipient, and shall not be liable for any loss, damage or cost directly or indirectly incurred or arising due to the reliance on the information contained in the report. Any client/recipient making use of this report, hereby indemnifies and holds the SU harmless against any such loss, damages or cost.

SU has strict policies which regulate the protection of its name, brand, trademarks and intellectual properties (“SU’s IP”). SU’s IP may not be used in any form of marketing of any product or service and the client/recipient acknowledges and agrees not to directly or indirectly represent or create the impression that the SU has endorsed any of its products or services.

If needed, companies may state “the [indicate specific part(s)] of the face mask was tested by a leading South African university”.

Signed: 29 MAY 2020