

Test Report No. 7191212151-EEC19/01-WBH
dated 29 Aug 2019



PSB Singapore

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SUBJECT:

Testing of leather submitted by Secretlab SG Pte Ltd on 04 Jun 2019 and 16 Aug 2019.

TESTED FOR:

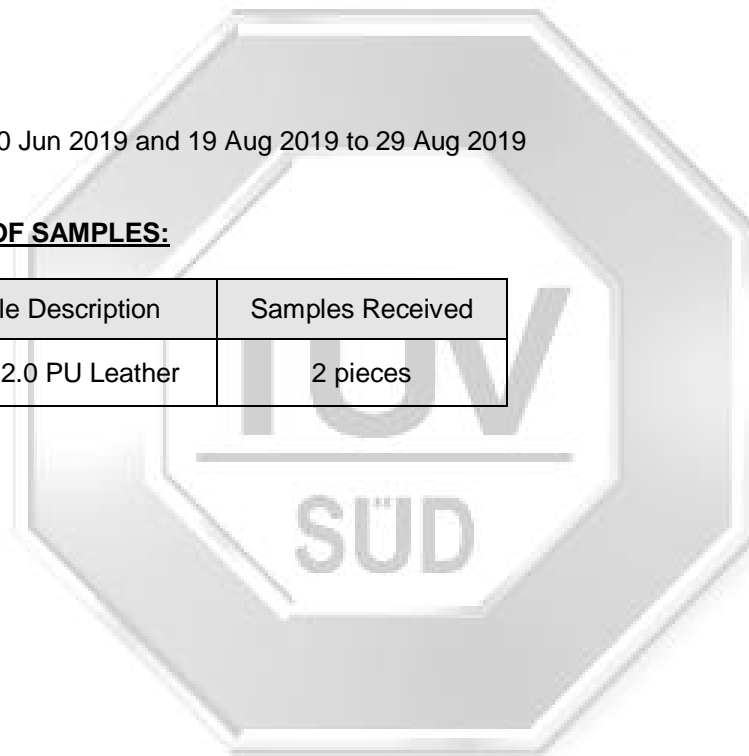
Secretlab SG Pte Ltd
994 Bendemeer,
03-07,
Singapore 339943.

TEST DATE:

04 Jun 2019 to 20 Jun 2019 and 19 Aug 2019 to 29 Aug 2019

DESCRIPTION OF SAMPLES:

S/N	Sample Description	Samples Received
1	PRIME 2.0 PU Leather	2 pieces



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TUV®

METHOD OF TEST:

As agreed by the client, the tests were conducted in accordance with the following method:

1. ISO 105-X12:2016 Textiles – Tests for colour fastness – Part X12: Colour fastness to rubbing
2. ISO 105-B02:2014 Textiles – Tests for colour fastness – Part B02: Colour fastness to artificial light: Xenon arc fading lamp test
 - Irradiance method : Continuous
 - Irradiance : 42W/m²² @ 300 to 400 nm
 - Filter (Inner) : KG1 filters
 - (Outer) : Borosilicate Cylinder
 - Lamp : 2200W Air-cooled ozone free xenon lamp (TruFade)
 - Black Panel temp : 45 ± 3 °C (Normal Condition)
 - Relative humidity : 40 – 45% (Normal Condition]
 - Chamber temp : 35 °C
 - Test duration : 20 - 22 Hours
3. EN ISO 105-E04 Textiles – Tests for colour fastness – Part E04: Colour fastness to perspiration
4. ISO 13937-2:2000 Textiles – Tear properties of fabrics – Part 2: Determination of tear force of trouser-shaped test specimens (Single tear method)
 - Gauge length : 100 mm
 - Rate of extension : 100 mm/min
 - No. of specimens : 10 (5 each in warp and weft direction)
5. ISO 13934-1:2013 Textiles – Tensile properties of fabrics – Part 1: Determination of maximum force and elongation at maximum force using the strip method
 - Gauge length : 200 mm
 - Rate of extension : 100 mm/min
 - No. of specimens : 10 (5 each in warp and weft direction)
6. EN ISO 12947-2:2016 Textiles – Determination of the abrasion resistance of fabrics by the Martindale Method – Part 2: Determination of specimen breakdown
 - No. of abrasion rubs : 200 000
 - Mass per unit area : 835 g/m²
 - Abrasion load : 12 kPa
 - No. of specimens : 3
7. ISO 5402-1:2017 Leather – Determination of flex resistance – Part 1: Flexometer method
 - No. of flex cycles : 200 000
 - No. of specimens : 4



RESULTS:

Sample: PRIME 2.0 PU Leather

Table 1. Results for Colour Fastness Tests

S/N	Test		Result (Grey Scale Rating)	
1	Colour Fastness to Rubbing	Dry rubbing	Warp direction	5
			Weft direction	5
		Wet rubbing	Warp direction	5
			Weft direction	5
2	Colour Fastness to Light		5	
3	Colour Fastness to Perspiration	Colour change	Acid solution 5	Alkaline solution 5
		Colour staining		
		a. Spun Diacetate	5	5
		b. Bleached Cotton	5	5
		c. Spun Polyamide	5	5
		d. Spun Polyester	5	5
		e. Spun Polyacrylic	5	5
f. Worsted Wool	5	5		

Table 2. Results for Physical Tests

S/N	Test		Result	
4	Tear Force Test (N)		Warp direction	43
			Weft direction	94
5	Breaking Force Test	Average maximum force (N)	Warp direction	710
			Weft direction	360
		Average elongation at maximum force (%)	Warp direction	17.5
			Weft direction	26.0
6	Martindale Abrasion Resistance		Abrasion resistance ≥ 200 000 rubs	
7	Flexing Test Flex cycles: 200 000		No damage was observed.	

REMARKS:

1. Notes on Grey Scale Rating:
Grade 5 = No Colour Change
Grade 4 = Slight Change
Grade 3 = Noticeable Change
Grade 2 = Considerable Change
Grade 1 = Much Change
2. For Colour Fastness to Rubbing, rubbing cloth was soaked in distilled water and >95% of take-up was attained.
3. For Colour Fastness to Perspiration, multifibre adjacent fabric complying with ISO 150-F10 was used.
4. For Tear Force Test, the result is rounded to 2 significant figures.
5. For Breaking Force Test, the result for average maximum force (N) is rounded to the nearest 10N for values below 1000N and the results for average elongation is rounded to the nearest 0.5%.
6. For Martindale Abrasion Resistance Test, the test result is expressed as the number of rubs of the inspection interval prior to the end-point of the test specimen being reached.
7. For Flexing Test, the sample was tested in dry condition for 200 000 flex cycles.



Lee Dai Yi
Engineer



Wong Bee Hui
Product Manager
Consumer Products

APPENDIX:



Photo: PRIME 2.0 PU Leather

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July 2011

